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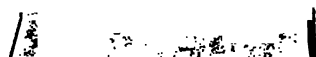
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Rev. Joseph Cook's  
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*BOSTON MONDAY LECTURES, U.S.*

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# MONDAY LECTURES

IN

TREMONT HALL, BOSTON, U.S.

By REV. JOSEPH COOK.

*THIRD SERIES.*



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London:

R. D. DICKINSON, FARRINGDON STREET, E.C.

1879.

265 . i . 731 .



LONDON :  
PRINTED BY SMYTH & VERWORTH, HOLBORN BUILDINGS,  
HOLBORN, E.C.

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## REV. JOSEPH COOK'S LECTURES.

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### *DECLINE OF RATIONALISM IN THE GERMAN UNIVERSITIES.*

#### I. GOD IN GERMAN HISTORY

STRAUSS is in his grave ; Baur's doubts are solved in the unseen ; Schleiermacher and Neander are asleep on the hill slope south of Berlin ; Fichte and Hegel lie at rest beneath the lindens in a cemetery in the same city ; Kant has a peaceful tomb at Königsberg ; Richter, at Baireuth, among his native Fichtelgebirge ; De Wette, at Basle, at the edge of the Alps ; Goethe, Schiller, and Herder, no disquiet wakes at Weimar ; Tholuck and Julius Müller, each laden with more than threescore years and ten, draw near the end of their victorious journey ; \* Austria has been humbled, Sedan fought, German unity accomplished.

The formation of the new German empire marks broadly the close of a great period in German history, extending from Frederick the Great to Bismarck, from Voltaire to Strauss, from the French Revolution to Sedan.

Curiously enough, the measurable political peace, coming after terrific struggle to the whole nation, coincides with the measurable intellectual peace coming after terrific struggle to the most cultivated classes. There have been deluges of unrest ; but conclusions are being reached as to political unity, and also as to Christianity. The greatest questions in the mental and in the political life of Germany are approaching repose in the same period, and that our own.

It is an exceedingly suggestive sign of the times that, in proportion to population, Great Britain has but one student in a course of higher university education where Germany has five.† In this age it is from Germany that decisions in momentous intellectual questions proceed. Every day the world grows more international. There are now no foreign lands. It has been said that in England one is never quite

\* Dr. Tholuck has died since this was written.

† Arnold. Professor Matthew, *Higher Schools and Universities in Germany*, pp. 148, 149. London. 1874. Compare Hart, *German Universities*, p. 322. 1875.

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outside of London, because the city inflames the whole island. So in science, one is never quite outside of the German universities, for they inflame the whole field of culture.

Suppose that there were to be lifted from the waste of some ocean a new continent peopled by a class of men equal to the Greeks in intellectual power, and their superiors in candour and learning. Let moral culture abound in the family life of the nation, but let Church life be weak; let political causes choke the Church; let wars storm over the territory; let public discussion be free only in philosophy, theology, and art; let system after system of metaphysical speculation arise, reign briefly, and be superseded; let the universities of the nation lead the world in modern science; let Christianity, probed to the innermost by restless spirits, with no outlet in politics for their activity, take its chances among this people; let it go through many a struggle; let it ask no assistance, and fight ever at a disadvantage; let it be partially triumphed over in appearance; let it rally; let it prevail; let it come forth crowned: we should say, if God were to lift such a continent, with such a history, from the Atlantic, that He had spoken to men. But such a people, with such a history, he has lifted, in the last century, in Germany, from the deeps of time.

### II. THE MISCHIEF OF FRAGMENTARINESS.

What have been the causes of the power of Rationalism in Germany in the last hundred years?

What are the proofs of the decline of Rationalism in the German universities?

Who are the dead, the wounded, and the living, after the battle of a century?

Chief among the difficulties with which faith in Germany has contended, has been one-sidedness in the presentations of Christianity. Science without earnestness, or earnestness without science, these were the two halves of German theological thought a century ago. Most mischievous, almost fatal, was the fragmentariness of a cold, speculative orthodoxism, on the one side, and of a warm, unspeculative pietism on the other.\* If Spener and Wolff could have been rolled into one man; if Francke and Semler could have lived in one head, perhaps English deism, and Voltaire and his sceptical crew at Frederick's court, had never stung, or, if they had stung, had never fly-blown, the fair, white, honest breast of Germany to fevers and eruptions.

Average German natures are not as well balanced as the English,

\* Compare Farrar's *Critical History of Free Thought*, lecture vi.; Hagenbach's *German Rationalism, its Rise, Progress, and Decline*, vii.-xi. T. and T. Clark, 1865.

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although broader and more subtle intellectually, and deeper in nearly every phase of the inner life, except only those royal English traits, self-esteem and the love of power.

There are three types of German heads; that of Goethe, or the regular; that of Schiller, or the irregular; that of Bismarck, or the thick, high, and round. A head of the Schiller type in theology knows little of the pietistic side; a head of the Goethe type little of the philosophic; only a head of the Bismarck type combines the two. The regular type is often, like Goethe, powerful in the intuitive and imaginative, and not so in the distinctively philosophical faculties.\* The irregular type may have great imaginative and philosophical, but lacks intuitive power. A German philosopher, with the irregular head of a Schiller,† is sure to be one-sided, and yet may be as endlessly acute and imaginatively brilliant as he is unbalanced. Heads of the Bismarck type naturally devote themselves to statesmanship or to positive science; and it will be found that a line of such brains, like Von Moltke in war, Trendelenburg, Nietzsche, Dörner, Tholuck, and Julius Müller in theology, Kiepert in geography, Lepsius in archæology, and Curtius in history, have exhibited the balanced thought of the nation.

No one has read Germany history if he has not illustrated the narrative by the portraits of the leaders of thought.‡ Eccentric systems, in Germany as elsewhere, have come from small or irregular brains, as in the case of Strauss, Schenkel, and Schopenhauer.

### III. DISUSE OF THE DISTINCTION BETWEEN CONVERTED AND UN-CONVERTED.

FRUITFUL, exceedingly, among the causes of the power of Ration-

- "Ein Kerl, der speculirt,  
Ist wie ein Vieh, auf dürrer Heide  
Von einem bösen Geist herumgeführt,  
Und rings umher ist grüne Weide."—Goethe.

† His form . . . at no time could boast of faultless symmetry. He was tall and strongly bowed, but unmuscular and lean. . . . His face was pale, the cheeks and temple rather hollow, the chin somewhat deep and slightly projecting, the nose irregularly aquiline.—Carlyle, *Collected Works, Life of Schiller*, p. 228.

‡ "In all my poor historical investigations, it has been, and always is, one of the most primary wants to procure a bodily likeness of the personage inquired after; a good *portrait*, if such exists; failing that, even an indifferent if sincere one. . . . Every student and reader of history, who studies earnestly to conceive for himself what manner of fact and *man* this or the other vague historical name can have been, will, as the first and directest indication of all, search eagerly for a portrait; for all the reasonable portraits there are; and never rest till he have made out, if possible, what the man's natural face was like. Often I have found a portrait superior in real instruction to half a dozen written biographies, as biographies are written; or rather, let me say I have found that the portrait was as a small lighted candle by which the biographies could, for the first time, be read, and some human interpretation be made of them."—Carlyle, *Collected Works*, Vol. xi, pp. 241, 242.

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alism in Germany has been the absence, not from its religious doctrines but from its Church forms, of that distinction between the converted and the unconverted so familiar in Scotland, England, and the United States.

"I regret nothing so much," said Professor Tholuck to me, once, with the emphasis of tears in his deep, spiritual eyes, "as that the line of demarcation between the church and the world, which Jonathan Edwards and Whitefield drew so deeply on the mind of New England, is almost unknown, not to the theological doctrines, but to the ecclesiastical forms of Germany. With us confirmation is compulsory. Children of unbelieving, as well as of believing families, must at an early age be baptised, and profess faith in Father, Son, and Holy Ghost. Without a certificate of confirmation in some Church, employment cannot be legally obtained.\* After confirmation, the religious standing is assumed to be Christian; after that, we are all Church members. Thus it happens that in our State Churches the converted and the unconverted are mixed pell-mell together."

"Is Bismarck a Christian?" I asked once of an accomplished German teacher. "Why not? Is he a Jew? Is he a Mohammedan?" was the reply. To ask in Germany if a man is a Christian, in the English, Scotch, or American sense of that question, you must use expletives: Is the man a real, a shining, an exemplary Christian? for the unexplained word which in our colloquial use means that a man is converted, in Germany means only that he has been confirmed.

Pastoral care of the mass of the population is, of course, very inefficient under this vastly maladroit organisation of the German State Church; public and private devotional meetings languish; Church discipline is often no more than a name.†

"We have no Sabbath-schools in Heidelberg," said a distinguished and Christian professor of the Heidelberg University to me once; "and, with exceptions not worth mentioning, there are none in Germany.‡ We do not need them; for the instruction you give in Sabbath-schools we give in the secular schools. In our common week-

\* In a few of the cities of North Germany infamous licences were granted to women for an infamous employment, but only after the applicants for licences had exhibited to the licensing officer their certificates of confirmation!

† Compare Schaff, Professor Philip, *Germany, its Universities, Theology, and Religion* (chap. xi.). See also his instructive contrasts between German and American Church life, in *Der Bürgerkrieg und das christliche Leben in Nord Amerika*, Berlin, 1866.

‡ "The rightly so-called *American Sunday-schools*, . . . since Mr. Woodruff visited us in 1863, have augmented to about one thousand, and the number of children therein instructed by more than four thousand young men and women to about eighty thousand."—Krummacher, Rev. Hermann, *Christian Life in Germany*.

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day school instruction an hour is specially set apart for teaching the children the Biblical histories and the catechism.\*

"But what you explain as a solemn public profession of faith on entrance into membership with a church, does not exist in Germany. The distinction which you say prevails in America generally, between persons who have made such a profession of faith and of a renewed character, and those who have not—the former being called church-members, and distinctively Christians, while the latter are not—is a distinction not in use with us. We are all confirmed in youth, and after confirmation, are all members of the Church, and all known as Christians.

"What you describe as a gathering among church-members for devotional purposes, or a prayer-meeting, does not exist with us, except among the very severely orthodox. Here in Heidelberg, among the higher orthodox, there are small meetings called conventicles, held from house to house, in private rooms, but not in the church. Our theological students do not have prayer-meetings.

"What you explain as pastoral visitation is not practised with us, unless in a few country churches. You will find something in books as to our theory of pastoral care; but it is by no means the general custom of our preachers to visit their people for the purpose of conversation on personal religion. Were a pastor to open conversation on the personal religion of a man, in the man's house, the reply would probably be: 'There is the door; you can go out, or I must.'

"If a student in the university were to lead a disorderly life here at Heidelberg, and yet were a member of Peter's Kirche, where the most of the Professors worship, the Church, as such, would do nothing to call him to account. You ask what the pastor would do in such a

\* I copy from my notes written at Heidelberg some account of a favourable specimen of the religious teaching in German schools. "Friday, Nov. 22: This morning from eight to nine I witnessed the religious instruction which is given to one of the upper classes in the Lyceum of Heidelberg. Twenty-six boys of about fourteen years of age were: 1. Questioned on the second chapter of Genesis; 2. Furnished by their teacher with further explanations of the history; 3. Made to take down in writing from dictation certain heads summarising the instruction. Strauss himself could hardly have tripped up the explanations given by the teacher, whom I took for a young minister. The history was called 'a symbolical representation of the ideal and actual state of man; of the circumstances arising in the human dispositions under temptation; of the action of conscience before, during, and after sin.' The conversation of the woman with the serpent illustrated—first, doubt as to the authority of the moral law; secondly, the force of passion in presence of its objects; lastly, remorse and shame. Symbolical representation of the action of conscience was what the history was explained to be. On the whole I was pleased with the exercise; although the substitution of such instruction for Sabbath-schools leaves the Churches very inert. There is in the Lyceum, this teacher told me, a Catholic, and also a Jewish religious exercise. The Protestant, such as I saw, occupies two hours a week. 'Wir haben keine Sonntag Schulen,' said this teacher, when I spoke of schools of that kind in America."



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case: he preaches on Sunday, and nothing farther is within the limits to which he is expected to confine himself.\* Family life in Germany would do what it could to bring to a sense of his duty any immoral person; but the Church preaches, and does not visit or exercise discipline in such cases as you say often result in the exclusion of a person from church membership in New England. In very extreme cases, indeed, the university expels privately a disorderly student."

At Halle, at Berlin, at Leipzig, at Dresden, at Göttingen, and at Heidelberg, I looked in vain for Sabbath-schools and prayer-meetings.

Halle has led the religious life of Germany for a hundred and fifty years; and yet, said Professor Tholuck to me: "There are no devotional meetings in our churches worth attending. It may be said that, according to the Scottish and English idea, the State Churches of Germany have no prayer-meetings. Once a week, in the churches of Halle, there is a biblical exercise. The pastor always leads; and the only remarks that are made he makes. Sometimes, in this exercise, a Christian member of the audience offers a prayer; but this is all. Our theological students may know more Hebrew, Greek, and philosophy than yours: but most unfortunately, as they have had no training to such gatherings in the State Churches, they do not come together in devotional meetings as yours do. *Bene orasse, est bene studuisse*, you understand better than we. I have been subjected to no distress in my lecture-room greater than that caused by the fact that our churches leave unsupplied, in the minds of the students, that devotional seriousness and elevation which are the only fit preparation for scientific study of religious truth. I beseech you not to judge of the condition of religion in Germany by the condition of our State Churches."†

Most assuredly must we maintain, however, that the health of religion in a nation depends on a *mens sana in corpore sano*; the universities are the mind, but the Church training of the people is the body; and when the latter, as in Germany, is seamed through and

\* Compare Tholuck, *Das academische Leben des 17ten Jahrhunderts*.

† "Die veränderte Ansicht vom Verhältnisse der Kirche zum Staat hatte eine Veränderung der Stellung des Geistlichen zur Folge. Je mehr die Thomasiussche Ansicht vom Geistlichen als Staatsdiener sich verbreitet, desto mehr schwindet der religiöse Nimbus, mit welchem der geistliche Stand bisher umkleidet gewesen: er tritt in der Reihe die Staatsdiener."—Tholuck, *Geschichte des Rationalismus, Erste Abtheilung*, p. 167. "In the year 1808 all consistories, both upper and lower, were swept away; and until some considerable time after our war of deliverance our evangelical Church existed without even the breath of one single church institution or authority. The Government transacted all the former business of the consistories . . . I see no help for German Christendom save in the formation of churches. Yes; churches! That is my watchword, my loud, crying appeal to the Church of Germany, which needs churches. They are the sole condition of life for the Church."—King Frederic William IV. *Two Treatises* 1845.

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through with weakness and disease, how can the former remain sound? The eye for religion is not cultivated by the training which in Germany usually precedes theological study. The moral atmosphere of the German universities exhales from broad marshes of confessedly stagnant State Church life; and it is in the condition of the vapours which these neglected, steaming, batrachian flats cast up, that the wonders some German university telescopes have seen in the sky find an important explanation. Face to face with the nearly omnipresent lack of spiritual cultivation, I, for one, did not, when in Germany and meditating long on the banks of the Rhine, the Saale, the Neckar, the Ilm, the Spree, the Elbe, and the Danube, feel impressed with a tenth part of the intellectual respect for German scepticism which it is not uncommon to find in the minds of untravelled men.

A noble, but religiously neglected people, naturally honest and earnest, the German masses, as in the days of Tacitus, make a kind of religion of family life. Hegel was proud of the fact that *Gemüthlichkeit*—the name for what he considered the most characteristic trait of the Germans—is a word without any equivalent in French or English; \* kindness of nature, tenderness, *soulfulness*, are, perhaps, the best English expressions for it; and this quality, conjoined with the renowned German sincerity, gives the nation a capacity for religious culture excelled by that of no other on the globe, and fit to make it the mission of Germany, as Hegel thought it was, to bear through the ages the Christian principle. But the capacity is as yet unoccupied.

Studying often and searchingly the faces of the common people in the market-places of Europe, I used to think that to produce a salutary effect by speaking to them on religion, I should need a day with the Germans, and succeed on the merits of the case; an age with the English of the lower orders, and succeed only when my cause had become respectable among the upper classes; a millennium with the French, and succeed then only to expect a revolution of opinion every three days.

### IV. CONTAGION FROM FRANCE.

MORAL, intellectual, and social contagion from France must be mentioned with painful emphasis among the causes of the power of Rationalism in Germany.

Voltaire and Frederick the Great at Sans Souci. You know the story made so brilliant by Carlyle.† From the time of Louis XIV.

\* Hegel, *Philosophy of History*, Part ix., sect. 1, chap. 1.

† "There is nothing in imaginative literature superior in its own way to the Episode of Voltaire in the *Fritzlied*. It is delicious in humour, masterly in minute

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to that of Napoleon, the numberless petty courts of Germany took their ideas of morality and taste from Paris and Versailles, almost as slavishly as Frederick the Great took his literary fashions from Voltaire. Think, too, of the humiliations of Germany under Napoleon, when his personal rule extended from the Tiber to the Elbe, and when Leipzig and Berlin had passed into kingdoms dependent on France. Until Lessing's day, French taste ruled German literature; there was no German literature. Even Goethe thought his country unwise in resisting Napoleon; and the war of liberation, by the colossal blows of Leipzig and Waterloo, only fractured a yoke which it is to be hoped that Sedan has broken completely in twain.

In Halle, in 1872, I found in a large circulating library, in the best bookstore of the city, patronised by respectable people, and within a bow-shot of the university, a complete set of eighteen or twenty volumes of the works of an infamous French writer, whose productions, if exposed for sale in London, Edinburgh, or Boston, would be seized by the police, or would ruin the reputation of vender and purchaser—a great exception, no doubt, in Halle\*—but the books were worn black by use.

I had not been in Paris a week before I was permanently cured of all intellectual respect for French scepticism. Tacitus says the ancient Germans whipped the adulteress through the streets, and buried the adulterer alive in the mud.† But Julius Cæsar speaks of polygamous practices among the Gauls, and describes them as showy, cruel, and volatile.‡ Thomas Carlyle calls Paris the city of all the

characterisation. . . . It is in such things that Mr. Carlyle is beyond all rivalry, and that we must go back to Shakspeare for a comparison."—Lowell, Professor James Russell, *My Study Windows*, Carlyle, p. 135.

\* The wise and patriotic Frederick Perthes wrote, in 1826:—"When I was a child, enlightenment occupied the place of religion, and freemasonry that of the Church. Men of culture knew the Bible only by hearsay. . . . During the first ten years of my establishment at Hamburg, I sold not a single Bible except to a few bookbinders in the neighbouring country towns; and I remember very well a good sort of man, who came into my shop for a Bible, and took great pains to assure me that it was for a person about to be confirmed, fearing, evidently, lest I should suppose it was for himself. . . . Since the French Revolution, the rod of Divine chastisement has not been wielded in vain on our lacerated country. The sensual, godless frivolity of the last century wanders about only as a dusky, obsolete ghost."—Perthes, Frederick, *Memoirs*, vol. ii. pp. 243, 246.

† "Inesse quin etiam sanctum aliquid et providum putant; nec aut consilia earum aspernantur aut responsa negligunt. . . . Quamquam severa illie matrimonia, nec ullam morum partem magis laudaveris. Nam prope soli barbarorum singulis uxoribus contenti sunt. . . . Paucissima in tam numerosa gente adulteria; quorum poena praesens, et maritis permessa; accisis crinibus, nudatam, coram propinquis expellit domo maritus ac per omnem vicum verbere agit. Publicatae enim pudicitiae nulla venia. Non forma, non aetate, non opibus maritum invenerit."—Tacitus, *Germaniae*, 8, 18, 19; Cf. Cæsar, *De Bello Gallico*, vi. 21.

‡ Cæsar, *De Bello Gallico*, iii. 19; vi. 16—19.

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devils.\* "Poor Paris," I heard him say once in his study at Chelsea, "they have done nothing there but lie for eight hundred years." Bismarck, speaking with facetious seriousness, says, that if you take from the average native Parisian—not the Frenchman, who is a different character—his tailor, the hair-dresser, and the cook, what is left is Red Indian. These men ought to know France; but if their representations fit this century less well than the last, in the city, which is the play-ground and sewer of Europe, it is yet certain that average Paris is politically and morally the city of little boys. For ethical and ethnological reasons, it is of no consequence what is thought of theology by Paris. There are several chambers lacking in the typical Parisian brain. In Germany can be found everything good but elegance; in France, nothing good but elegance. Eternity is not visible from Paris.

## V. SUFFERING OF GERMANY IN EUROPEAN WARS.

Demoralisation of the people by protracted and almost incessant European wars, deserves a high rank among the causes of the power of Rationalism in Germany, even in the last century.

"Scratch a Russian," said Napoleon, "and you will find beneath the surface a Tartar." Scratch peasant life in central Europe once, and you find the wars of the first Napoleon; twice, and you find the Thirty Years' War; thrice, and you find the Middle Ages.

After the sack of Magdeburg, Tilly cast six thousand bodies of the citizens into the Elbe, and the river was choked by the mass. Soldiers in the Thirty Years' War were largely foreigners and mercenaries, and paid, from necessity and on principle, in beauty and booty. Cossacks, Walloons, Croats, Italians, Irishmen, and Turks fought with Scots, Dutchmen, Danes, Swedes, Laplanders, and Finns. Germany for a generation was a howling hunting ground for the rabble of all nations. One hundred years, to a day, after the Augsburg Confession was promulgated, that is, on June 24, 1630, John Winthrop was sailing into Boston harbour and Gustavus Adolphus was landing fifteen thousand men in Pomerania. For a hundred years after that date, the plundering bands of Wallenstein did not disappear. From fear of starvation, a Swedish general, in the second half of the war, refused to lead an army through the once fat plains of the Oder and the Elbe, from the Baltic to the Saxon Switzerland. When Louis XIV. stole Strasburg in 1681, the dead German empire was too feeble to resent the robbery. The Turks, at the instigation of the French king, swarmed far up the Danube, and laid down forty-eight thousand lives

\* Carlyle, *The French Revolution, passim.*

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in a nearly successful siege of Vienna. The Thirty Years' War gave to death half the population of Germany, It left her divided into more than three hundred petty states, each with the right to declare war and make peace; and into fourteen hundred yet pettier political fragments each with the same right, and each depending upon a peeled peasantry for the means of feeding the ostentation and leprosy of courts filled with nobles often unable to read or write, and combining with soundly orthodox belief incredible coarseness, dulness, and savagery. Shivering the once orderly and majestic German constellation into asteroids, it left in existence no central sun. It allowed merely asteroid princes to acquire such power that for two centuries national unity was impracticable. It subjected all Germany to the inroads of French armies. It brought into fashion French manners. Switzerland and the Netherlands, at one time a part of the empire, were given up to the Peace of Westphalia. In Switzerland Germany lost its best fortress, and in the Netherlands its best port; in the former, its surest defence against attack by the Romance nations; in the latter, its surest means of influence on the sea and in remote regions of the world. Great before, for two centuries after the close of the Thirty Years' War, Germany founded no colony on any shore and showed no flag on any ocean.\*

When the French, in 1689, blew up the towers of Heidelberg; swung a fire-brand up and down both shores of the Rhine; filled the Palatinate with the hungry, the naked, and the frozen; scattered to the winds, at Spire, the splintered coffins and violated dust of the German emperors; and at Treves, Jülich, and Cologne compelled the peasants to plough down their standing corn, Louis XIV.'s plan was to protect himself from Germany by making the Palatinate, and the middle region of the Rhine, a desert.

With Frederick the Great came war on war; with Napoleon, war on war. Cæsar's robe was not so full of dagger-rents as is German soil of battle-fields. In German-speaking lands lie Magdeburg, Lützen, Nordlingen, Prague, Rossbach, Hohenlinden, Austerlitz, Eylau, Aspern, Erlingen, Wagram, Jena, Leipzig, Waterloo, Langensalza, Sadowa, and Königgrätz:

"Poor dumb mouths . . .

Mark how the blood of Cæsar followed them."

## VI. POLICE CHRISTIANITY AS THE ALLY OF ABSOLUTISM.

Support given by State Churches to absolutism in politics, and the consequent alienation of the masses of the population and of the more

\* Compare Bancroft, *History of the United States*, Vol. X. p. 83, Menzel, *Wolfgang, Geschichte der Deutschen*, 5 Aufl. 1856. (Eng. trans., in Bohn's Library). Menzel, Karl Adolf, *Neuere Geschichte der Deutschen*, 2 Aufl., 6 Bde. 1856.

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rogressive of the educated class, ought to be named early in any enumeration of the causes of Rationalism in Germany.

Too often in Europe the cause of infidelity is that the Bible has been forced down the throats of the people with a bayonet, or food taken from starving lips by aristocracies whose throttling and thievish action a State Church has blessed. "I daily thank God," said Chevalier Bunsen, on his dying bed, "that I have lived to see Italy free. Now twenty-six millions will be able to believe that God governs the world."\* Red republicanism as yet makes white republicanism impossible in Europe. Still in the trance of perpetuated horror of the French Revolution, Church and State in Germany in 1848 united in resisting the demands of the people for political reforms. Until very lately, any too marked agitation for German unity itself has been choked with a strong hand, and the Churches applauded the act. Christlieb says, "that for two centuries the law of German history has been that infidelity grows strong under oppressive, and weak under just civil regulations."† Evil exceedingly is that day in a nation when religious and political interests flow in opposite directions; these opposing currents make the whirlpool that impales faith on the tusks of the sea. The German population of the ruder sort look on the preacher as merely a governmental agent, and scoff at his teaching as "Police Christianity." It must never be forgotten that the Romish is in Germany one of the State Churches, and by compact organisation and religious loyalty to the subtle creed that the Church governs the world, the Pope the Church, and the Jesuits the Pope, has almost power enough to disintegrate the new empire. As Bismarck and Gladstone‡ are proclaiming, patriotism and Jesuit ultramontaniam, now as of old, mingle no better than water and fire.

### VII. LIMITATIONS AND STIMULATIONS OF THE UNIVERSITIES.

Limitation of free discussion, in the universities and elsewhere, to philosophy, theology, and topics not connected with the civil life of the nation, has a prominent place among the inciting causes of German Rationalism.

Political discussion is not free inside or outside of the universities in Prussia. Politics absorb an exceedingly small portion of the talent of educated men. Compared with the swirling, devouring whirlpool

\* Bunsen, *Memories of*, vol. ii. p. 562.

† "Nothing like the old bureaucratic system to produce and foster Rationalism. . . . Since the re-awakening of political life, the popular favour towards materialistic theories seems to have sensibly diminished."—Christlieb, Professor Theodore, of the University of Bonn, *Modern Doubt and Christian Belief*, p. 18 (Eng. trans.). 1874.

‡ Gladstone, Hon. W. E., pamphlets on *The Vatican Decrees*, and *Vaticanism*. 1875.

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of political discussion in England or America, German civil life is an unruffled sea.\* Great waves, unknown here, roll there in science, philosophy, and theology. Look into the book-stores at the Leipzig fairs, or into the university lecture lists, to get reports of this commotion among the educated class, and not into the newspapers. Under a vigorously paternal government, newspapers have little power, and so attract little talent. Accordingly, there are no newspapers in Germany; at least none at all comparable for ability or influence with the leading sheets of the English or American press. The universities in Germany absorb that huge amount of intellectual activity which America and England diffuse through an awakened and multitudinously throbbing public life. General enthusiasm in politics does not exist in Prussia, still less in the smaller states of the empire.

It is only upon scientific, philosophical, and literary topics, that discussion in the universities is fully free. In the absence of great political and social themes, the stream of intellectual activity, which never runs shallow in Germany, shut off from one of its natural channels, turns its whole force upon philosophy, science, and theology. If the result has in many respects been excellent, in many also it has been unfortunate; for the very current that has made the channel deep, has borne with it a drift-wood of utterly secular, turbulent, and intriguing spirits, whose natural outlet would have been politics, and who had no calling, except from necessity, to discuss any other theme.

The brilliancy of a German professor's success depends much on the size of his audience; and he is under no inconsiderable temptation to secure hearers by novelty of doctrine.

The professor is chosen for his merit as a specialist; he attracts hearers by his fame as a specialist; his rank is estimated according to the extent of the additions he has made to knowledge as a specialist; his ambition for scholarly renown leads him to seek perpetually to find or invent some new thing as a specialist.

Competition for hearers is intensely keen at times under the operation of the peculiar system of the university lectures, supported largely by the fees paid by students who voluntarily subscribe to hear certain courses.

There is rivalry between the professors of the three different orders

\* "A disinterested love of truth can hardly co-exist with a strong political spirit. In all countries where the habits of thought have been mainly formed by political life, we may discover a disposition to make expediency the test of truth. . . . It is probable that the capacity of pursuing abstract truth for its own sake, which has given German thinkers so great an ascendancy in Europe, is in no slight degree to be attributed to the political languor of their nation."—Lecky, *Rationalism in Europe*, vol. ii. p. 145.

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—regular, extraordinary, and candidate. The *Privat Dozent* of a German university is really a candidate professor, and one of his offices is to keep the regular professors strenuously wakeful by competition.

This rivalry is intensified by the custom in Germany of assembling in circles of instructors at the universities, always a majority of the brilliant men of learning of the whole country. In England one may count among those in the last fifty years distinguished for learning, at least a score who had no connection with universities; but in Germany one can find in that period hardly any such. Macaulay, Carlyle, Mill, Grote, Prescott, and Irving, never were professors in a college; but in Germany, if any learned person has anything to say, he is usually provided by the government with a chance to say it in lectures to students at some university centre.

Undoubtedly the German universities, on all topics within their range, have at present more power than the German nobility to set the fashions of public thought.

No one can enter the civil service or a learned profession in Germany, except through the gate of a State examination, at the close of a university course of study. The secret of the national power of the German universities is in this close connection with the State. "The university," says Bismarck, "exists for imperial purposes." The American and the English universities do not rest on State preparatory schools, or end in the State service. The German university rests on the State gymnasiums, and ends in the civil service and learned professions.\*

America governs by majorities, England by an aristocracy, Germany by universities.

Modern German society is a spiritual landscape, with stagnant flats and reedy marshes, extensive as those of the Baltic provinces themselves, but also with wide tracts thrown up, like South Germany, into Thuringian hills and Saxon Switzerlands, or even into Alpine peaks, on which day strikes first and lingers longest. Examined more closely, however, the novelties which surprise a stranger are seen to be arranged in a most definite order. Prussian society consists of these seven parts: the king, the civil service, the army, the universities, the nobility, the tradesmen, the peasants. I assign the universities a rank as a class, and that rank next higher than the nobility; for such is now, according to the best German critics, their relative position.†

\* "The French university has no liberty, and the English universities have no science. The German universities have both."—Arnold, Professor Matthew, *Higher Schools and Universities in Germany*, p. 166. London. 1874. Compare also Hart, *German Universities*. New York. 1875.

† "After the Reformation, nearly all eminent men in Germany—poets, philos-



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Acting in the eye of the nation, and on this elevated stage of public respect, German professors are stimulated, as no other university teachers in the world are, both to excellence and to rivalry.

I find in these circumstances the explanation of the fact that the German universities are the best now in existence, and also of the circumstance that among the multitude of their productions they have given to the public some most wild and perishable systems of thought.\*

### VIII. RISE AND FALL OF PHILOSOPHICAL SYSTEMS.

COMPLETE or partial overthrow of many celebrated schools in philosophy on which theology had unwisely been made to depend, is a recent cause of the power of Rationalism in Germany, especially of the later materialistic phases of unbelief, which sneer at metaphysics as an impossible science. Never since Plato and Aristotle has so much metaphysical ability been displayed as by Kant, Fichte, Schelling, and Hegel; but in Germany Fichte and Schelling are obsolete; Hegel, obsolescent; Kant only has foundations upon which this country dares to build.

A Herbart, a Beneke, a Rothe, a Trandelenburg, a Schopenhauer, have come and gone; but, for twenty-five years, no commanding system of philosophy has arisen in a land which in philosophical gifts possesses the primacy of the world. A return to Aristotle and Kant has distinguished the later German metaphysics. To-day, in the hands of a Kuno Fischer, the history of philosophy is made to attract almost as much attention as philosophy itself;† and in those of a Hermann Lotze,‡ metaphysics and physics are jointed together as the opposing ribs of a new vessel, which perhaps is destined to endure the shock of wind and wave where fleets ribbed with metaphysics only went down, even with Schellings, Fichtes, and Hegels at the helm. But neither Lotze nor Fischer pretends to undertake, what was the joy of older admirals,

phers and historians—belonged to the Protestant party, and resided chiefly at the universities. The universities were what the monasteries had been under Charlemagne, the castles under Frederick Barbarossa—the centres of gravitation for the intellectual and political life of the country. . . . The intellectual sceptre of Germany was wielded by a new nobility . . . that had its castles in the universities.”—Muller, Professor Max, *German Classics*, preface, xxvi.

\* “Professional knight-errantry still waits for its Cervantes. Nowhere have the objects of learning been so completely sacrificed to the means of learning; nowhere has that Dulcinea—knowledge for its own sake,—with her dark veil and her barren heart, numbered so many admirers; nowhere have so many windmills been fought, and so many real enemies left unhurt, as in Germany, particularly during the last two centuries.”—Muller, Professor Max, *German Classics*, preface, xxvii.

† *Geschichte der neueren Philosophie*, 6 Bände.

‡ *Mikrokosmos*, 2 Bände, Leipzig. 1872.

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the circumnavigation of the yet uncircumnavigated globe of philosophy. These giants, among costly wrecks, pace to and fro sadly on the ocean shore. They did not set sail; and yet they perform for thought an incalculable service, by keeping the world in view of the limitless horizons. Meanwhile, out of sight of the sea, in the marshy interior of a grovelling materialism, a Moleschott and a Carl Vogt can assert that there is no ocean; and even the pigmy Büchner, from lack of height of outlook, through twenty editions of a shallow book, can proclaim the impossibility of both metaphysics and religion.

### IX. DOCTRINAL UNREST OF THE AGE.

THE doctrinal unrest of the age in most, from the acquisition of new facts in many, departments of thought, is a chief force in all modern history, and has been exceedingly efficient among the causes of German Rationalism. Nearly every other branch of human inquiry besides theology has been supplied with a new method and new materials within a century; and it was neither to be expected nor desired that scholars would not seek a new method for the latter science; and it was to be expected, though not desired, that when they could not find copious new materials for it, they would invent them. Really new materials, however, have been brought to theology in the last century from the department of exegetical research. An age of new truths and facts is necessarily a period of unrest as to old ones. Although ultimately it may be found that the old and the new agree, acquisition of fresh materials for belief and the crystallisation of those materials around ancient beliefs are processes which do not succeed each other without an intervening space of investigation and uncertainty. It is upon precisely these intervening spaces in history that scepticism has seized as battle-fields, only to lose them one by one, in a long line of defeats reaching now through eighteen centuries. But there never was a more important intervening space of this sort than the last age in Germany, except the first age of Christianity in Asia and Europe.

### X. STATE AID TO RATIONALISTIC SECTS.

STATE aid to Rationalistic Churches I class among the causes that have given Rationalism power to make a noise in Germany. If a majority in a church at Heidelberg, for instance, vote for a Rationalistic preacher, they can have him, and yet retain State aid. Among ourselves, under the voluntary system, Rationalistic organisations could not long exist, for they have not earnestness enough to pay their own expenses; but in Germany loaves and fishes keep them

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together under the endlessly vicious practical arrangements of the State Churches.

There are three methods of arranging the relations of Church and State. Separation, or the American plan; exclusive establishment of one confession, or the English plan; concurrent establishment of several confessions, or the German plan. Catholics, Lutherans, and Calvinists, had equal civil rights secured to them by the Peace of Westphalia. Even in Prussia Romanists to-day have larger gifts from the public treasury than Protestants. Confessional equality, a great watchword, having in it the agonies and blisses of German religious life for centuries, is a cry never hypocritically uttered by the lips of Prussia.

But, although Dissenters from the three recognised confessions have had no formal help from the State, it has been the theory of each establishment that the whole population must be baptised. Until very lately, every family, believing or unbelieving, was obliged to cause its children to profess faith, and pass the rite of confirmation, or incur for the children the gravest civil disabilities. Thus, in practice, all Dissenters have been really within and not without the Church. In many of the smaller principalities, individual churches have been predominantly Rationalistic, and yet have retained their income from the State.\*

## XI. CATHOLICISM IN SOUTH GERMANY.

CATHOLICISM, covering all South Germany, and stimulated to act the part of mere reactionary Romanism by influences from beyond the Alps and the Rhine, I rank as a powerful cause of German Rationalism, for it has prevented half the German people from seeing what a Church can accomplish; made the lives of vast peasant populations a prolonged childhood; disgusted scholars by its absurdities of doctrine; resisted the progress of the nation toward Protestant unity; and seeks now to destroy an empire whose power is the best guarantee of both peace and progress in Europe.

Pope Boniface wrote to Philip the Fair of France—"Boniface to Philip, greeting: Know thou, that thou art subject to us both in spiritual and temporal things." The king replied—"Philip to Boniface, little or no greeting: Know thou, O supreme fool! that in temporal things we are not subject to anyone." Such would now be the answer of America, or England, or Scotland, to similar pretensions.

\* "Half, at least, of the destructive power of European infidelity in past generations, has been due to the presence of the party within, instead of without, the Church."—President Walker, *Evangelical Alliance Report*, p. 253. 1873.

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Such is to-day the answer of Germany. If necessary, this answer would be given by Great Britain or the United States through the cannon's mouth. If necessary, it will so be given by the German Empire. Ultramontanism against nationality is the simple issue between the Pope and Bismarck. First a Catholic and then a citizen, or first a citizen and then a Catholic, is the ancient question Berlin debates with Rome. In the long struggle between the civil and ecclesiastical power, England stood three hundred years ago where Germany stands to-day. By the celebrated Bill passed in 1851, "to restrain her Majesty's subjects in their due obedience," Parliament asserted in principle all that now causes outcry against the sternness of Prussia toward Romanists of the disloyal type. Summarising with fairness the history of Ultramontanism for five hundred years, Bismarck said once to the Prussian Parliament, that "the goal which, like the Frenchman's dream of an unbroken Rhine boundary, floats before the papal party—the programme which, in the time of the mediæval emperors, was near its realisation—is the subjection of the civil power to the ecclesiastical."\* William I. writes to Pius IX. that Catholic citizens of Germany, at the instigation of Ultramontanism, conspire against the unity and peace of the Empire. Pius IX. replies: "Every one who has been baptised belongs to the pope in some way or other."†

Henry IV., in smock and barefoot, stood three days in the snow before the palace of Pope Hildebrand, at Canossa, imploring absolution. In 1872 Bismarck said of the German Empire: "We are not going to Canossa, spiritually or physically." But it was by barely a majority of one that great, rich, Romish Bavaria was brought to the aid of the rest of Germany in the war of self-defence against Napoleon III. France echoed the scorn of Philip the Fair in his famous answer of contempt to the Pope; she is to-day governed by Ultramontanism. Canossa is not the goal of the centuries; but the feet of one hundred and ninety millions of the human race yet tread its snows.

## XII. SUMMARY OF CAUSES.

THESE, then, in my judgment, are the ten chief causes of the power of scepticism in Germany in the last century:—

1. Fragmentary presentations of Christianity in the spirit of earnestness without science, or of science without earnestness.
2. Maladroit organisation of the German State Church; first, in the use of compulsory confessions of faith at the confirmation legally

\* Bismarck, Speech in the Prussian House of Lords, March 10, 1878.

† Letter of Pius IX. to the Emperor William, August 7, 1878.

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required of the whole population, whether believing or unbelieving; and secondly, in the absence of the, to us, familiar distinction between the converted and the unconverted, and in a consequently stagnant Church life.

3. Moral, intellectual, and social contagion from France.

4. The demoralization arising in Germany from its having been the principal theatre of European wars.

5. Support by the Church of a popularly odious absolutism in politics.

6. German university life in its peculiar limitations and stimulations of free discussions.

7. The overthrow of several celebrated German systems of philosophy.

8. The doctrinal unrest of the age in most, from the acquisition of new facts in many, departments of thought.

9. State aid to Rationalistic organisations.

10. Roman Catholicism in South Germany.

I am aware how difficult it is to present in proper perspective a complicated array of causes and effects extending through a hundred years; and that, for patriotic and political reasons, even candid German writers do not always arrive at a frank admission of the power of some of these causes. But whoever has read between the lines in European history, and listened to the whispered as well as to the spoken and printed thought of Germany, will recognise in this analysis her own unpublished judgment of herself. On such authority, it is well to be able to assure the superficial sceptic that, in the most learned land on the globe, Rationalism had several other sources of influence besides its own intellectual merits.\* In view of these enumerated causes, it is not surprising, nor to a scholar's faith is it intellectually annoying, that scepticism has had power in Germany, and that it yet retains power among the slightly educated.

### **XIII. EMPTY RATIONALISTIC AND CROWDED EVANGELICAL LECTURE ROOMS.**

IN the German universities the incontrovertible fact is that the Rationalistic lecture-rooms are now empty, and the Evangelical crowded; while fifty or eighty years ago the Rationalistic were crowded, and the Evangelical empty.

Lord Bacon says that the best materials for prophecy are the un-

\* As was to be expected, one of the places in Boston where information on the decline of Rationalism in the German universities appears to be needed, is the Radical Club, yet misled by Hegel, on whom Transcendentalism built so arrogantly and incautiously forty years ago.

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forced tendencies of educated young men. Take up any German year-book, look at the statistics of the universities, ascertain which way the drift of educated youth is now setting in the most learned circles in the world, and you have before you no unimportant sign of the times.

But, in looking for this, you come upon another sign no less important, namely, that the leading universities of Germany are now, and eighty years ago were not, under predominant Evangelical influence.

Berlin, beyond doubt the university of first importance, and hallowed by the great names of Schleiermacher, Neander, and Trendelenburg, is theologically led by Dorner, Semisch, Steinmeyer, and Twisten—staunch defenders of Evangelical faith.

Leipzig, with Kahnis and Luthardt and Delitzsch—and lately with Tischendorf—among her professors, contests with Berlin for the first place, and in the opinion of many deserves that rank, and is the renowned traditional seat of an orthodoxy which at some points New England and Scotland—agreeing in the main with the present attitude of Berlin—might consider excessive.

Halle, whose theology permeates Germany, both from the university and from Francke's famous Waisenhaus, has in it Tholuck, and Köstlin, and Kühler, and Guericke, and Jacobi, and Schlottmann, and Julius Müller, known throughout the world as antagonists, and as successful antagonists, of the subtlest forms of scepticism. It is not uncommon to hear Julius Müller spoken of as the ablest theologian of Germany.

Tübingen itself, where Strauss put forth one of his earliest works, and Baur founded a theological party, has had in it for years no Tübingen school, but through the professorships of Beck, Palmer, and Landerer, is permeated by vigorous Evangelical influences.

Heidelberg, under the theological leadership of Schenkel, Hitzig, Gass, and Holtzmann, is to-day the only prominent university of Germany given to views that can be called Rationalistic.

Now, which of these institutions is most patronised by German theological students? Halle and Berlin may be compared, in a general way, as to their theology, with Andover and Newhaven; Leipzig, with Princeton; and Heidelberg, with the Unitarian portion of Cambridge.

I found Dorner's, Müller's, and Tholuck's lecture-rooms crowded, and Schenkel's empty. In 1872-3 there were but twenty-four German theological students at Heidelberg; and I have heard Schenkel often, and never saw more than nine, eight, or seven students in his lecture-room. Against twenty-four German theological students at

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Heidelberg, there are one hundred and thirty-two at Leipzig, two hundred and fifty-seven at Halle, two hundred and thirty-nine at Berlin. But counting both the native and the foreign theological students in these institutions, the whole number at Rationalistic Heidelberg is thirty-four; at Evangelical Halle, two hundred and eighty-two; at Evangelical Berlin, two hundred and eighty; at hyper-Evangelical Leipzig, four hundred and twelve.\*

It must be remembered that German students often change universities, passing one period in one and another in another, according to the attractions of different professors. It is immaterial to the German student where he hears lectures, provided he is prepared to pass with credit the severe final examinations. When a professor is called from one university to another, a large number of his hearers often follow him. Thus it is a fair test of the direction of the drift of educated youth in Germany, to point to the fact that they give their patronage to Evangelical, rather than to Rationalistic professors, and this in the overwhelming proportion of ten to one.

#### XIV. TESTIMONY OF THOLUCK, DORNER, CHRISTLIEB, SCHWARZ, AND KAHNIS.

"By far, by far," is Professor Tholuck's constant answer, when asked by foreign students if orthodoxy is not stronger in Prussia than fifty or eighty years ago.

In 1826, at Halle, all the students, except five, who were the only ones that believed in the Deity of our Lord, and all the professors of the university, united in a petition to the government against Tholuck's appointment to a professorship there, and the opposition rested solely on the ground of his Evangelical belief.† The students at Tübingen, not far from the same date, ceremoniously burned the Bible. "When I came to Halle," said Professor Tholuck to me once, as he walked up and down that famous, long, vine-clad arbour in his garden, where his personal interviews with German and foreign students have exerted an influence felt in two hemispheres, "I could go twenty miles across the country and not once find what, to use an English word, is called an 'experimental' Christian. I was very unpopular. I was subjected to annoyance, even in my lecture-room, on account of my Evangelical belief." "His adversaries are bold and cunning. A baptism of fire awaits him at Halle," wrote Frederick Perthes of the young professor, in 1826.‡

\* Meyer, *Deutsches Jahrbuch*. Erster Jahrgang, p. 1002.

† Tholuck. Letter to the New York meeting of the Evangelical Alliance, Report, 1873.

‡ Perthes, *Memoirs*, Vol. ii. p. 268.

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Contrast these murky threats of Tholuck's morning with the clear sky of his westering sun. In December, 1870, he had completed so much of a half-century of work at the University of Halle that three days were given by his friends to the celebration of the event. There were social gatherings, and suppers, and speeches at the hotels. All the halls and staircases of Tholuck's residence were crowded with guests. The Emperor William sent to him the star of the Red Eagle. Court preacher Hoffmann brought to him the salutations of the ecclesiastical council as to a veritable church father of the nineteenth century. The various universities of Germany were represented by their ablest professors. Pastors of different cities sent delegations. A letter to Tholuck was received, signed by theologians at that hour in the army before Paris. An immense torchlight procession of students filled a night with Luther's hymn :—

“Ein feste Burg ist unser Gott.”

“No one can deny,” Professor Tholuck would say to me repeatedly “that since the death of Frederick the Great, or the French Revolution, or the opening of the century, or even since fifty or forty years ago, there has been a great reaction in Germany against infidelity and Rationalism.

“You are right in pointing to the impotence of the edict issued in favour of orthodoxy by Frederick William II., on the death of Frederick the Great, as proof that it has not been the favourable attitude of the State towards orthodoxy that has caused the reaction. Frederick the Great had no influence to promote scepticism in the lower and middle, but he did mischief among the upper classes.

“Frederick William III. and William IV. were favourable to orthodoxy; and William I., our emperor, is thoroughly so. Much depends on the attitude of the Court at Berlin in respect to the churches. In Weimar, however, a preacher without belief in the Deity of Christ, and with denial of miracles, may be connected with the State Church. In respect to orthodoxy, Weimar is one of the most lax of all the provinces of Germany. It would probably not be true to say that in the small territory of Weimar infidelity is less powerful than fifty years ago, although that is most certainly the case in Prussia.

“Hagenbach has written a history of the rise, progress, and decline of German Rationalism, and his book I put first into the hands of foreign students coming to Germany, and asking information from me. I am myself writing a work on the same subject.

“As to men of science and professors in the philosophical faculties with us, they are often uninformed concerning theology; but Ma-



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terialism makes much less noise in Germany than in England. If a man is a Materialist, we Germans think he is not educated."

On account of their having little freedom to discuss political, German professors are intensely jealous of their liberty to discuss literary, scientific, philosophical, and theological topics. Whoever has breathed the quickening oxygen of the atmosphere of a German university will understand very well that it is by no means the changed attitude of the State towards orthodoxy that has brought about the reaction against Rationalism. Scepticism had its greatest power under Frederick William II. and Frederick William III., who opposed, as much as Frederick the Great had favoured, Rationalism. In Germany it is almost a proverb that the soul of a university is made up of *Lehr Freiheit* and *Lern Freiheit*.

"No," said Professor Dorner in his study at Berlin, when I mentioned Professor Tholuck's opinion of Weimar. "Rationalism, even in Weimar and Thuringia, was quite as strong fifty years ago as it now is."

"That is nothing" (*Das ist nichts*), he remarked emphatically, and added no more, speaking of the Rationalism of Renan.

"The writers who discuss Materialism," he said, "are in Germany more anti-dogmatic than ethical. As to the Rationalists themselves, we have more who agree with Channing than with Parker.

"The mass of our preachers are genuine believers, but among the populace one can sometimes find infidelity. The mass of our divines are convinced, but they are too contentious. In Prussia, unbelief is much weaker than fifty years ago, or in the time of Frederick the Great. Then Rationalism was the loyal theology. Most certainly, Rationalism in Germany, taken as a whole, is plainly and by far weaker than fifty years ago."

"The proposal," says Professor Christlieb, "to implore the Divine blessing and assistance on the deliberations of the Frankfort Parliament, in 1848, was received with shouts of derisive laughter." "For the last thirty years," he writes, "in spite of all hostilities, a truly Christian science has begun victoriously to lead the way, by new and deeper exegetical researches; by historical investigation; by pointing out the remarkable harmony existing between many new archæological, ethnological, and scientific discoveries. In the pulpits of by far the greater number of the German churches, and in the theological faculties of most of the universities, it has so completely driven unbelief out of the field, that the latter has been compelled to retire, in a great measure, into the divinity schools of adjacent countries—Switzerland, France, Holland, Hungary. When compared with these and other countries, Germany shows that unbelief has a greater tendency to in-

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sinnate itself into, and to make its permanent abode among half-educated rather than thoroughly educated communities."\*

"So much is to be confessed," says court preacher Schwarz, of Gotha, author of the acutest† of the histories of recent theology, "Schleiermacher's work has been incomparably more enduring, and quietly and inwardly more transforming, than Hegel's. Schleiermacher's influences yet advance, while those of Hegel are exhausted and dead."‡

"It is spring," says Professor Kahnis, of Leipzig, in 1874. "The period since the wars of liberation represents the conflict of the newly quickened heat of the German mind with the masses of snow and ice of the *Aufklärung*. Until to-day the conflict endures; but ever mightier grows the sun, ever weaker the winter."§

This testimony of German professors to the fact of the decline of scepticism in the German universities, I might make voluminous; but it is enough to show the accord of confidential and colloquial with printed testimony, and the agreement of five such authorities as Tholuck, Dorner, Christlieb, Schwarz and Kahnis.

## XV. SEPARATION OF CHURCH AND STATE.

BOTH the Prussian Constitution and the fundamental statutes of the German Empire alike declare that the Evangelical Church shall be free to manage its own internal affairs. Schleiermacher himself, in 1808, drew up for the king a sketch of a Church constitution which foreshadowed much that is now becoming law. The Cabinet order of Frederick William III. gathered, in 1817, the Lutheran and Reformed Churches into an Evangelical Union. The contest with Romanism has now obliged Prussia to give to that Union as much independence of the State as Romanists enjoy. The eight provinces of the old Prussian kingdom—that is to say, nearly all the Protestants of North Germany—are being drawn together under one Church constitution, of which the principle is essentially Presbyterian. The effects are likely to prove inauspicious to Rationalism, which has steadily resisted the abolition of the bureaucratic management of the ecclesiastical and religious life of the nation.

Church and State in Germany are slowly separating; the bureau-

\* Christlieb, Professor Theodore, *Modern Doubt and Christian Belief*, pp. 18, 63.

† Farrar, A. G., *Critical History of Free Thought*, Bampton Lectures, preface,

xxv.

‡ Schwarz, Dr. Carl, *Oberhofprediger und Oberconsistorialrath zu Gotha, Zur Geschichte der neuesten Theologie*, Vierte Auflage, 25. Leipzig, 1869.

§ Kahnis, Professor K. F. A., *Der innere Gang des deutschen Protestantismus*, Dritte Ausgabe. Zweiter Theil, 162. Leipzig, 1874. These four are the best recent works on German Rationalism.

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cratic tutelage and bondage of the Church are becoming things of the past; a determined purpose is exhibited, on the part of both government and scholars, to call out a regulated religious activity among the masses of the people. As the German peasantry and middle class have never been taught to give money freely for religious organisations managed by themselves; as the Rationalism outgrown in the universities has only too much power with the populace, especially in the large towns; as Sabbath-schools and prayer-meetings, and all the machinery of the voluntary system in Church affairs, are in Germany conspicuous by their absence, the separation of Church and State in the Empire will not occur without many most painful temporary disadvantages.\* The poorer clergy will starve for a time; and there will be wide tracts of baptised torpor and unbaptised indifference and paganism in the religious life of the lower classes. Ultimately, however, when the dangers of allowing religious marshes to go undrained have become sufficiently evident and alarming, and the impotence of Rationalism to drain malarious soil has received adequate illustration, German sagacity and honesty will cause the stagnant fens of German Church life to wake with currents which, it is to be hoped, will one day make of its green, sedgy, and pestilential pools a clear, flashing, and brimming river.

## XVI. GERMAN PRIMACY IN EUROPE.

IMMENSE commercial, political, and moral advantages accrue to Germany from her unity, sought in agony for two hundred years. Schiller did not hesitate to say that Europe was sufficiently compensated for the horrors of the Thirty Years' War by an increased sense of the interdependence and need of union among its nations.† At Sadowa, in 1866, at the close of the battle which gave to central Europe Prussian and Protestant, instead of Austrian and Romish, leadership, and ended a struggle which Frederick the Great began,

\* "In many sections of Germany, especially the northern regions, where Lutheranism prevails, the congregations are almost as passive, dependent, and incapable of self-government as in the Roman Catholic Church, and Luther's complaint of the want of material for elders and deacons must be repeated in this nineteenth century after Protestantism has been in operation for more than three hundred years. The people are only expected to be ruled, and hence they have no chance to learn individual and congregational self-government, which must be gradually acquired, like every other art."—Schaff, Professor Philip, *Germany, its Universities, Theology, and Religion*, pp. 112, 113.

† "Aber Europa ging ununterdrückt und frei aus diesem fürchterlichen Krieg, in welchem es sich zum erstenmal als eine zusammenhängende Staatengesellschaft erkannt hatte; und diese Theilnehmung der Staaten an einander, welche sich in diesem Krieg eigentlich erst bildete, wäre allein schon Gewinn, den Weltbürger mit seinem Schrecken zu versöhnen."—Schiller, *Geschichte des dreissigjährigen Kriegs*, Sämmtliche Werke, v. 2.

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the sun came forth from under heavy clouds in the low west, and the united armies of North and South Germany, struck by the omen, gathered around their commander and sang :—

“Now all thank God!”

In that late hour the Reformation first became politically an assured success in the land of its birth. Sadowa is Germany's best hope of internal, Sedan her best hope of external, freedom from war.

But whenever Germany, beaten down almost constantly under the hoofs of military strife, has had time to catch breath, she has shown a recuperative power that has astonished all Europe. In the thirty years after the battle of Waterloo, her soil was not once touched by war, or by the tread of foreign troops. Her historians assign to that period her first real recovery from the effects of the Thirty Years' War. In 1818, bold, wise, indefatigable Prussia abolished all duties upon goods in transit through its own territories. For commercial purposes Germany became a unit in 1828. Even under the imperfect league of the Zollverein her navy was the third in extent in the world. Agriculture grew prosperous. Capitals of princes were not the only cities distinguished for wealth and culture. At the mere dawn of that national unity and peace of which the full sunrise was at Sedan, commerce in Germany awoke from the dead. The rapid growth of Cologne, Breslau, Magdeburg, Nuremberg, and Berlin amazed Vienna and wounded Paris. The overshadowing and swiftly increasing prosperity of Germany and her approaches to political unity drew upon her the attack of Napoleon III. Sedan opened to Victor Emmanuel, Rome; to the angels Peace and Union, entrance on German soil; to Napoleon, his grave; to contagion from France, an antidote. At last Germany has military and political, as well as intellectual, primacy in Europe. Versailles leads her fashions no more. Voltaire is not asked to be her tutor.

On those very grounds of Sans-Souci, where Frederick the Great and Voltaire had called out to the culture of Europe, “*Ecrasez l'infame!*” King William and his queen lately entertained an Evangelical Alliance gathered from the Indus, the Nile, the Danube, the Rhine, the Thames, and the Mississippi.

## XVII. BAUR, STRAUSS, AND RENAN.

BUT who does not know the history of the defeat of sceptical school after sceptical school on the Rationalistic side of the field of exegetical research? The naturalistic theory was swallowed by the mythical theory, and the mythical by the tendency theory, and the tendency by the legendary theory, and each of the four by time. Strauss laughs at Paulus, Baur at Strauss, Renan at Baur, the hour-glass at all.

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"Under his guidance," says Strauss of Paulus, "we tumble into the mire; and assuredly dross, not gold, is the issue to which his method of interpretation generally leads."\* "Up to the present day," says Baur of Strauss, "the mythical theory has been rejected by every man of education."† "Insufficient," says Renan of Baur, "is what he leaves existing of the Gospels to account for the faith of the Apostles."‡ He makes the Pauline and Petrine factions account for the religion, and the religion account for the Pauline and Petrine factions. "Criticism has run all to leaves," said Strauss, in his bitter disappointment at the failure of his final volume.§

Appropriately was there carried on Richter's coffin to the grave a manuscript of his last work—a discussion in proof of the immortality of the soul; appropriately might there have been carried on Strauss's coffin to his grave his last work, restating his mythical theory, if only that theory had not, as every scholar knows, died and been buried before its author.||

## XVIII. SUMMARY OF PROOFS.

AMONG the proofs, then, that scepticism in Germany is declining in power with those whose special study is theology, are the facts:

1. That in the German universities the Rationalistic lecture-rooms

\* Strauss, *New Life of Jesus* (Eng. trans.), p. 18.

† Baur, *Krit. Untersuch.* über die canonischen Evangel., 121, 40-71.

‡ Renan, *Etude d'Hist. Rel.*, 168.

§ "Baur acknowledged the four leading Epistles of Paul to be genuine, and to have been written before A.D. 60. Now this admission is fatal to the sister theory of Strauss; for these Epistles prove that Jesus was not an ordinary man, around whose idolised memory His disciples, in the course of a century or so, wreathed mythical fictions, not knowing what they did; but that the culminating facts of His life, the leading traits of His character as given in our so-called mythical Gospels, were familiar to the Christian world within twenty-five years after His death."—Professor J. Henry Thayer,

|| Zeller, the admiring biographer of Strauss, says: "As a point of weakness in his last volume, *The Old and New Faith*, he designated in one of his letters the beginning of the fourth section on morals. 'Here,' he writes, 'immediately after the appearance of the work, a couple of solid beams have still to be inserted, and if you could supply me with a few oak or even pine stems, you would deserve my sincere thanks.' The public discussions on the work were almost without exception disapproving. . . . Average theological liberalism pressed forward eagerly to renounce all compromising association with Strauss after he published this last statement of his mythical theory. He was deeply grieved, and it required some days before he could regain his calm composure."—Zeller, Professor Eduard, of the Heidelberg University, Strauss in his Life and Writings (Eng. trans.), pp. 135, 141, 143. London, 1874. "The idea of men writing mythic histories between the time of Livy and Tacitus, and St. Paul mistaking such for realities!"—Bunsen, *Arnold's Life*, letter cxlix. Strauss "bezeichnet nicht sowohl eine Epoche als eine Krise, nicht sowohl einen Anfangs- als einen Schlusspunkt. . . . Die Einseitigkeit des Strauss'schen Geistes, welche bei allem Glanz seiner Detail Kritik in den neuesten Werke besonders auffallend hervortritt, ist ein doppeltes Vacat, ein Mangel an geschichtlichem Blick und religiösem Sinn."—Schwarz, *Geschichte der neuesten Theologie*, 3, 557.

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are now empty, and the Evangelical crowded; while fifty or eighty years ago the Rationalistic were crowded, and the Evangelical empty.

2. That histories of the rise, progress, and decline of German Rationalism have been appearing for the last fifteen years in the most learned portions of the literature of Germany.

3. That such teachers as Tholuck, Julius Müller, Dorner, Twisten, Ullmann, Lange, Rothe, and Tischendorf, most of whom began their professorships with great unpopularity in their universities, on account of their opposition to Rationalistic views, are now particularly honoured on that very account.

4. That every prominent German university, except Heidelberg, is now under predominant Evangelical influences, and that Heidelberg is nearly empty of theological students.

5. That the attitude of the general government at Berlin has destroyed the force of many of the political causes of disaffection with the State Church.

6. That the victory at Sedan and the achievement of German unity diminish the chances of demoralisation from European wars, and by contagion from France.

7. That in the field of exegetical research, while Rationalism has caused the discovery of many new facts, and the adoption of a new method, the naturalistic theory by Paulus, the mythical theory by Strauss, the tendency theory by Baur, and the legendary by Renan, have been so antagonistic to each other as to be successively outgrown both by Christian and by Rationalistic scholarship.

### XIX. RESULTS OF SCIENTIFIC CRITICISM.

BEYOND controversy are many great results of the theological discussions in Germany for the last hundred years; nor have the attacks of Rationalism been an unmixed evil.

A doctrine of the intuitions, basis of all ethical and metaphysical research, has been established by Kant.

A doctrine of conscience, growing up from the Kantian theory of the intuitions, is acquiring a height of outlook, from which the far-sighted already descry the scientific inference of the necessity of an atonement.

A doctrine of sin, built on the doctrine of conscience, has been made by Julius Müller to unlock all theology.

A doctrine of the personality of God has been founded upon the Kantian analysis of the intuitions, and has already supplied the chief deficiencies of Kant's own system, besides undermining the Pantheism of Fichte, Schelling, and Hegel.

A system of criticism has grown up in relation to everything his-

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torical in Christianity; and exegetical research has been placed upon a thoroughly scientific basis.

A vindication of the historical evidence of the supernatural has followed from an application of the new system of criticism.

A series of discoveries has been made, illuminating at important points the records of the origin of Christianity, and carrying back the date of the chief documents a full half of a century, narrowing by so much the previously too narrow space used by the sceptical theory to account for the growth of myths and legends, and so shutting the colossal shears of chronology upon the latest deftly-woven web of historical doubt.\*

A life of Christ is now the most natural form in which belief, resting upon a system of criticism common to sacred and secular history, expresses and defends its credence.

## XX. CHRISTIAN TREND OF THE CENTURIES.

WHOEVER ascertains the trend of the historic constellations through long periods, obtains a glimpse of the hem of the garment of Almighty God. What Providence does, it from the first intends. A sifting of Christianity has taken place in this last age by a prolonged contest of unbelief with faith, each armed with the best Damascus blades the world furnishes either to-day; and the result has been a defeat of doubt on all central points. It is, therefore, now certain that it was divinely intended that there should be a sifting of Christianity in this last age, and that a defeat of doubt should be the result. Prolonged historic tendencies are God allowing portions of His plan for the government of the world to become humanly comprehensible.

When the completion of a cycle of event reveals what the plan of the cycle was from the first, it behoves men, co-ordinating latest with

\* "Twenty years ago it used to be thought that the earliest proof of the reception of New Testament writings as of similar authority to the Old was to be found about the year 180; but recent discoveries furnish indubitable evidence that even the Gospels had acquired such a reception more than half a century earlier. . . . These discoveries, by carrying back for half a century the indubitable traces of the Gospels, prove such theories as those of Baur, Strauss, and Renan to be pure theories, . . . not only unsupported by the facts of history, but in opposition to the facts of history. . . . As a sect in Biblical criticism, the Tübingen school has perished. Its history even has been written, and that in more than one tongue."—Thayer, Professor J. Henry, *Criticism Confirmatory of the Gospels*, Boston Lectures, pp. 363, 364, 371. 1871. "Schenkel, Renan, Keim, Weizsäcker, and others equally removed from the traditional views, unite in insisting that the fourth Gospel could not have appeared later than a few years after the beginning of the second century. They found this opinion on irrefutable grounds. But if this be so, the key-stone falls from the arch. The course of development which the Tübingen critics describe, extending for a century from the death of Paul, and requiring this time for its accomplishment, is swept away. There is no room for it."—Fisher, Professor George P., *Essays on the Supernatural Origin of Christianity*, xxxviii. (new ed.) 1870.

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earliest cycles, to ascertain the trend of the movements in the sky ; and to gaze more solemnly than upon the stars themselves, upon that Form loftier than the stars, which passes by in the darkness behind them, its outlines not wholly visible, but the direction not unknown in which it is moving the constellations.

I commend this German theological battle-field to the timid and the hopeful, who go out to walk and meditate in the world's eventide. Goethe could say that the only real and the deepest theme of the world's and of man's history, to which all other subjects are subordinate, is the conflict between faith and unbelief.\* We are the ancients, as Bacon said ; but the inscription, written by history, which is God's finger, and no accident, before the sad eyes of the bruised and staggering ages, on the trophy erected after the severest intellectual battle of this oldest and newest of the centuries, is : *Via Crucis, Via Lucis!*

I do not respect any proposition merely because it is ancient, or in the mouths of majorities ; but I do respect propositions that have seen honest and protracted battle, but not defeat. The test of the soundness of scholarship is that it should contend with scholarship, not once or twice, but century after century, and come out crowned. But the intellectual supremacy of Christianity in the nineteenth century is not a novelty. There are other battle-fields worth visiting by those who walk and meditate, on which Christian trophies stand, more important, as marks of the world's agonies and advances, than any that ever Greek erected for victory at Salamis or Marathon. I lean on Church history. I go to its battle-fields, and lie down on them. They are places of spiritual rest. Gazing on their horizon, I see no narrow prospect but a breadth of nineteen hundred victorious years. Looking into the sky, as I lie there, I hear sometimes the anthem : " As it was in the beginning, is now, and ever shall be, world without end." I obtain glimpses of a heaven opened ; and " behold, a white horse, and He that sits on him is called the Word of God, King of kings, Lord of lords. He is clothed in a vesture dipped in blood ; but His eyes are as a flame of fire, and on His head are many crowns."

\* Goethe, Werke, *Abhandlungen zum westfälischen Divan*.



## DARWIN'S THEORY OF PANGENESIS, OR HEREDITARY DESCENT.

### PRELUDE.—A GERMAN SYMPOSIUM.

AN ancient wall around the city of Göttingen has been converted into a broad and lofty embankment and crowned with lime trees, and under them runs a wide, smooth walk, on which the professors and students of that university city are often found pacing to and fro. There has been started lately in Great Britain a magazine called *The Nineteenth Century*, and it has signalized its entrance upon the field of periodical literature by bringing together what it calls a modern symposium, or published interchanges of views among men of opposing schools in physical and religious science on the topic of the immortality of the soul. So thoroughly permeated are the discussions of even English theologians with tremor in the presence of the British materialistic philosophical school that I shall venture to ask you, in considering what the English symposium has said, to place that gathering of learned men face to face with their German peers. Let a new symposium be called on these walks of Göttingen, under the lime trees. Of course, we must invite to the assembly the ten men prominent in the English symposium: Mr. R. H. Hutton, Professor Huxley, Lord Blachford, the Hon. Roden Noel, Lord Selborne, Canon Barry, Mr. W. R. Greg, the Rev. Baldwin Brown, Dr. W. G. Ward, and Mr. Frederick Harrison.

Let us invite out of the theological faculties of benighted Germany, Professor Schoberlein, from Göttingen University, a man accomplished as a teacher of systematic theology. He has had a high position in the faculty at Göttingen for almost a quarter of a century, and probably, therefore, must teach mediæval views. From just outside this wall of Göttingen, on which the nightingales sing, invite out of the brown mansion yonder, among the orchards, Hermann Lotze. Let us take also from the same city and university the renowned defender of the doctrine of the Atonement, Ritschl, whose recent book on the Vicarious Sacrifice must be studied before any man can say that he is abreast of modern thought on that theme. Then from Halle let us take Julius Müller and Kostlin and Ulrici. The first of these three is often called the ablest of living theologians, and the last, as you know, is the editor of the *Zeitschrift für Philosophie*, the foremost philosophical magazine in the world. Let us take from Leipsic Kahnis and Luthardt, and especially Delitzsch, who has written a work on Biblical Psychology, a topic running close to the theme of the English symposium. From Berlin let us invite a scholar who is often called the ablest German theologian, and who in 1873 was a delegate to the Evangelical Alliance at New York—Professor Dörner, a man so far behind the times as to be trusted yet in the leading university of the world to represent the foremost

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chair of a department hallowed by the great names of Schleiermacher, Trendelenberg, and Neander.

These twenty men, ten British and ten German, are pacing up and down on the Göttingen walks, and we inexperienced people listen. Frederick Harrison, an English essayist and positivist, speaks first. This is his language:

"My original propositions may be stated thus:

"1. Philosophy as a whole (I do not say specially biological science) has established a functional relation to exist between every fact of thinking, willing, or feeling, on the one side, and some molecular change in the body, on the other side.

"2. This relation is simply one of correspondence between moral and physical facts; not one of assimilation. The moral fact does not become a physical fact, is not adequately explained by it, and must be mainly studied as a moral fact by methods applicable to morals—not as a physical fact, by methods applicable to physics.

"3. The correspondence specially discovered by biological science between man's mind and his body must always be kept in view. They are an indispensable, inseparable, but subordinate part of moral philosophy.

"4. We do not diminish the supreme place of the spiritual facts in life and in philosophy by admitting these spiritual facts to have a relation with molecular and organic facts in the human organism—provided that we never forget how small and dependent is the part which the study of the molecular and organic phenomena must play in moral and social science.

"5. Those whose minds have been trained in the moral philosophy of law cannot understand what is meant by sensation, thought, and energy, existing without any basis of molecular change; and to talk to them of sensation, thought, and energy, continuing in the absence of any molecules whatever, is precisely such a contradiction in terms as to suppose that civilization will continue in the absence of any men whatever.

"6 Yet man is so constituted, as a social being, that the energies which he puts out in life mould the minds, characters, and habits of his fellow-men; so that each man's life is, in effect, indefinitely prolonged in human society. This is a phenomenon quite peculiar to man and to human society, and, of course, depends on there being men in active association with each other.

"7. Lastly, as a corollary, it may be useful to retain the words soul and future life for their associations, provided we make it clear that we mean by soul the combined faculties of the *living* organism, and by future life the subjective effect of each man's objective life on the actual lives of his fellow-men."—*Nineteenth Century*.

Translating into the ordinary speech of mortals this first outburst of wisdom, we find it to mean that there can be no existence of the soul apart from the body. Science has proved that there is a molecular tremor connected with all thought, emotion, and choice; and, if death really is our total disembodiment, then, for a man who holds that there must be a tremor of some form of matter connected with choice, thought, and emotion, there is no proof of immortality. This essayist is probably of opinion that religious science teaches that death is not only an unfettering of the soul, but a real and total disembodiment of it in every sense.

Posthumous influence is all the immortality in which he can believe.

Let now the German symposium speak. This mediæval teacher of systematic theology, Professor Schoberlein, of Göttingen University, on his own field, his native heather, opens his lips, and this is the first thing we hear from him. I give you exactly his language, out of a book he published at

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Heidelberg, in 1872, called "*Die Geheimnisse des Glaubens*," a work of reputation as excellent as that of its author in German theology. "God has destined soul and body to exist in eternal unity with each other. There is a natural body and there is a spiritual body. Bodilessness implies a hindrance in free self-reservation. The highest perfection of the future, no less than of the present life, calls for the corporeity of the soul,"—See Professor Laroix's translation of Schoberlein, *Methodist Quarterly Review*, October, 1877, p. 687.

This essayist Harrison looks astounded; but the nightingales on the Göttingen wall continue to sing. "The soul," says Schoberlein, "appropriates from the outer world the materials suitable for its body. The formation of the body is not a result of mere chemical affinities between different elements of matter; but it is a vital process, it proceeds from the animate principle. The soul assumes to itself such elements as adequately express its life and wants. It itself, and not chemical affinities, is the organizing principle."—*Ibid*, p. 687.

Look into the faces of Julius Müller and Dorner, and Delitzsch and Lotze, and especially into the countenance of Ulrici, and you find no marked signs of dissent. There is a general agreement to what Professor Schoberlein says. Lotze for a quarter of a century has opposed the mechanical theory of life. Ulrici has defended more than once, in the name of biological science, the theory that the soul has an ethereal enswathement, from which it is not separated at death.

To these men the separation of the soul from the flesh is its unfettering, but not its unembodiment.

Frederick Harrison seems to be smitten with a new idea. But he is of opinion that this is not Christianity. He speaks again: "For my part, I hold Christianity to be what is taught in average churches and chapels to the millions of professing Christians. It is a very serious fact when philosophical defenders of religion begin by repudiating that which is taught in average pulpits."—*Nineteenth Century*.

He, therefore, would establish for philosophical science, inside the range of theology, a rule that he would not admit in the range of philosophical science, as connected with biology.

Am I to take every average physiological scribbler on the globe as authority in biology? Am I to adopt the average views even of magazine writers, infallible as they are concerning the latest science, in a field of investigation which was nowhere elaborately studied previously to 1860? No. We are to look to experts in biology for our facts; and so, in our interpretation of the Scriptures, we are to look to experts. We are to take the agreement of rival experts in the field of theological science as supreme authority, just as we take the agreement of rival experts in the field of biological science as final assurance of accuracy. When Frederick Harrison accuses this learned group of Germans of not following the scientific method employed by popular science, Ulrici replies that for twenty-five years he has been teaching the applications of that method to the relations of religion and science, and that if we are to be sternly true to the law of cause and effect we must infer the existence of some substance

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in which our sense of identity inheres. Ulrici affirms that it is stern, exact inference from the surety of our persistent sense of identity that there is something to which that sense belongs. There cannot be any seeing unless there is something that sees. There cannot be feeling unless there is something that feels. Now, we have a persistent sense of identity, we have a percipience of identity, and there must be a perceiver of identity. As this percipience is constant, the perceiver must be a unit from year to year, although the body changes, as we know, every twelve months. If Ulrici and Schöberlein and Lotze, with the general assent of their compeers, do not seem sound to certain omniscient writers for quarterly reviews, on our enlightened New England shore, which has led the world in philosophy and which needs no instruction from Halle, or Leipsic, or Göttingen, or Berlin; if Sir William Hamilton happens to have said, fifteen years before this new discussion came up, that such a theory is not very important, we, of course, shall dismiss it without any attention to dates in connection with Sir William Hamilton's opinion, or with Ulrici's and Lotze's and Schöberlein's words, here on the wall of Göttingen. But when we find five or six theological faculties teaching much the same view, we shall listen to Schöberlein when he says further:

"We must come to the standpoint of an *ideal realism*, which holds the middle path between a materialistic deification of Nature, on the one hand, and a spiritualistic contempt of it, on the other. Precisely this is the standpoint of the Holy Scriptures. In every position we shall take, our conscious purpose will be not to speculate without authority, but simply to educe into fuller expression that which appears to us as clearly involved in the Word of Inspiration itself.

"In the inorganic world we find matter and potency undistinguishable. Crystals, for example, are formed simply by the immediate action of the Spirit. It is only in the plant that force rises to some sort of individuality. Here there is a vital unity which attracts to itself homogeneous elements, and thus gives to itself an outer form. Such force is *life*, and such form an *organism*. At the next higher stage force becomes animal life. Here the central life has sensation and is able to bring its organism into different relations to the outer world. Such life, or force, we call *soul*; such a sensitive, movable, soul subservient organism is a *body*.

"The body is rooted with all the fibres of its being in the soul. Nay, the soul, on its nature side, bears already within itself the essence, the potentiality of a body; and it needs only to draw to itself the proper elements from the outer world in order that the germinally extant inner body actually posit itself as a crude outer body, even as the virtually extant tree, in the ungerminated seed, needs only to unfold its potency in order to become a real tree.

"The body appears, therefore, as an integral element of human nature, both in this state of probation and in the future state of eternal perfection.

"Jesus spiritualized his inner man, his soul, in its unity of spirit and of nature. Thus also he laid the foundation for the transfiguration, the ideal spiritualization of his body, inasmuch as the essence of the visible body is grounded in the soul. This process was an inner hidden one. The hidden reality shone forth only in occasional gleams—in those miracles of mastery over his body and over nature with which the Gospels abound. We emphasize simply the *identity* of the risen with the buried body. The essence of his body remained the same. Simply the mode of its existence was changed. A fleshy body has become a spiritual body, in which not

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only the free harmony of the soul with the inborn spirit stamps its harmony on the outer features, but also in which the material elements themselves are thoroughly permeated and exalted by the spirituality of the person."

Allow me to say that I did not know that Schöberlein had taught these doctrines, when, in recent lectures here, I defended similar propositions. It was, I confess, not known to me, until I made close research in the track of purely theological discussion, that an accredited teacher like Schöberlein had made this use of Ulrici's and Lotze's biological positions. But we continue to look into the faces of our German symposium and find no important dissonances there.

At these accordant propositions from theological and biological teachers Harrison begins to grow pale, and judges that it will be necessary for him to prove much more than he has done already, if he is to undermine the doctrine of immortality from the point of view of modern philosophy in its widest range. Schöberlein goes on and illustrates from all the facts of the life of our Lord the power of the spiritual body over the physical. You are familiar with the line of thought. In Schöberlein's words we are listening to suggestions precisely parallel to those presented here a few weeks ago :

"The peculiar traits of spiritual beauty which occasionally beam out from the persons of ripened believers are actual reflexes of the transfigured corporeity which lies potentially within them. The natural fleshy body is simply the receptacle, the womb, in which the new body is invisibly generated and qualified, up to the hour when, the crude flesh falling away, it shall pass into the heavenly state and spring forth into its full beauty and actuality."

The nightingale sings, and the curtain falls here ; but another week we shall proceed with our listening to this symposium.

### THE LECTURE.

In the field of the battle of Waterloo there was a concealed ditch of Oheim, into which regiments in retreat, pushed on mercilessly by their companions and pursuers in the rear, were cast alive, until the gap was full, and the hosts who were escaping from death passed across the chasm in safety on the bridge of their dead predecessors. The ditch of Oheim in the battle of Waterloo, between the theistic and materialistic forms of the theory of evolution is hereditary descent. How are we to fill up the chasm between life in the parent and life in the child, and use only the narrow mechanical theory of the origin of living tissues and of the soul? Say what you please of the subtler forms of German materialism, which I am not now discussing, the English forms are only other shapes of the old Lucretian atomic theory. My opinion is that, at the last analysis, every mechanical theory of life is only a redressed ghost of Lucretius. At any rate, when candidly unmasked, whatever has been given to us from England in support of materialism exhibits the faded features of the

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Lucretian hypothesis. Many and many a theory has fallen into the ditch of Oheim in this battle. Lucretius himself lies there at the bottom, a corpse. Fifty proud systems of materialistic philosophy lie above it; and now, writhing there on the very summit, under the hoofs of the retreating hosts, lies Darwin's theory of pangenesis.

What is Darwin's famous provisional hypothesis of pangenesis, and what are some of the replies to it? First, let me give you an outline of the theory in language containing no technical terms; next, let me state the theory in Darwin's own words; and afterwards permit me to mention the more important of the objections which may be made to its fundamental propositions.

Suppose that we have here a single naked mass of homogeneous bioplasm (drawing a figure like that of an amoeba upon the black-board). Let it be assumed that this piece of germinal matter is of one and the same substance in all its parts. It may be a living creature of one of the lowest types. If, now, this throbbing homogeneous bioplasm throws off from any part of its substance a portion of itself, the divided offspring will have qualities like those found in every part of its parent. We know that it is a peculiarity of bioplasm to divide and sub-divide itself. By a marvellous law of growth, the divided portions, when properly nourished, increase in size and acquire all the qualities of their parent. A minute particle or gemmule thrown off from a single mass of homogeneous bioplasm grows, according to the laws which belong to its parent, and becomes a mass like that from which it dropped off. Physical identity between the parent and the child is the groundwork of the explanation of the physical side of the law of heredity in sameness.

But now suppose that this animalcule, instead of being a single mass of bioplasm, consists of a more or less intricate structure. Let it be assumed that the upper and lower side differ, and that each of these has qualities distinct from those of the middle portion. If you are to account for the reproduction of that triplicate animal, you, according to Darwin's theory of pangenesis, must suppose a small mass of bioplasm thrown off from the lower section, another from the middle part, and another from the upper. Call the three portions of the animal 1, 2, and 3, and the gemmules thrown off from these parts respectively A, B, and C (illustrating on blackboard). A will have the qualities of the portion of the animal from which it comes—that is, of 1. B will possess the qualities of 2, and C of 3.

You have in this second case of hereditary descent the law of identity of substance in parent and gemmule carried out in a three-fold manner. There is identity between 1 and A, 2 and B, and 3 and C. The nourishing of the three gemmules will result, therefore, not in

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changing A into B, or B into C, or the reverse; but in changing A into a second 1, B into a second 2, C into a second 3. When, now, this result has been accomplished, how shall we account for the arrangement of the newly-developed parts in the proper manner? Everything turns on their being collocated as 1, 2, and 3, and in no other order. Here comes into Darwin's theory, therefore, in spite of his theistic concessions as to the origin of the first germs, the great and vague materialistic word "affinity." When the gemmules have begun to be developed, "elective affinities" start up between them, and they arrange themselves in the order exhibited by the parts of the original animal. We understand none too well how a single gemmule develops itself into a form like its parent. The permutations that may be rung on three numbers are very considerable; but soon we shall see gemmules choosing the one right combination out of all permutations possible in billions and trillions of numbers. It is not absolutely inconceivable, however, that when an animal has three separate parts, a gemmule from each part should, by its physical identity with the part from which it comes, inherit the property of developing into that part. But, on Darwin's implied theory of life, what causes these three parts to put themselves together in the proper way? Were either gemmule to forget its place, we should have a singular animal in the progress of that development. In the hurling about of all these gemmules, under merely chemical and physical forces, what keeps these three particles from ever getting out of place? How much must be meant by elective affinities in Darwin's *hypothesis*, which can be called a *theory* only by courtesy?

Materialism assures us that a co-ordinating power independent of matter is a dream, a poetic idea! Huxley says that "a mass of living protoplasm is simply a molecular machine of great complexity, the *total* results of the working of which, or its vital phenomena, depend, on the one hand, on its construction, and, on the other, upon the energy supplied to it; and to speak of vitality as anything but the name of a series of operations is as if one should talk of the horology of a clock."—(*Encyc. Brit.*, Art. Biology.) Huxley is not a materialist, you say; but I must judge men by their definitions. And, although there are many schools of materialism, I affirm, knowing what risks I run—I have run risks here for two years, and run yet—that this definition of Huxley's represents one of the most dangerous schools of materialism; for it assumes that the forces at work in the formation of the organism are merely chemical and mechanical. There is no life, no co-ordinating power behind the tissues.

If, therefore, you build your theory of descent on the mechanical

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and chemical forces merely, you must rest the weight of your case on that word "affinity." There are electric affinities between the gemmules of the different parts of an organism, and the result of these affinities is to put the germinal points together in the right order, so that the resulting animal shall be brought into existence right side up. Assuredly, your affinities must be very peculiar forces. Can they be simply chemical and mechanical and yet adequate to their work? How is it that the gemmules seem to be possessed of an inflexible purpose of coming together in the right form, so that the animal shall be built up 1, 2, 3, and not 3, 2, 1? What if I should get into the middle? Nothing but mechanical and chemical forces here, Huxley affirms. Darwin refuses in this theory of pangenesis to employ any other word than affinity. To talk about other forces would be like talking of the horology of a clock! (Of course, it is expected that whoever wishes to follow the discussion here will read the printed report and look up all the references. I am only too anxious that you should examine the original utterances on these subjects. I cannot, in the time given here, make every point clear unless you will look up the references made in print.)

If the affinities which bring the gemmules together in the right order are merely chemical, they are affinities of a kind chemistry knows nothing of anywhere else. Here is a species of affinity that exists only in germinal matter. Even in that kind of matter, which to all human tests is chemically the same in many different kinds of germs, the plans of the affinities differ as endlessly as the types of life.

If, now, you will multiply the three parts of this small organism, thus far used as an illustration, by a number representing the multitudinous parts in the most highly organized animal, and apply the same law of descent, you have Darwin's theory of pangenesis. We have here (drawing a figure on the blackboard), let us suppose, the outlines of some highly complex form of organism. I care not what—the foot of a frog or the back of my hand. It is a mass of interlaced living tissues, and it is crossed in every direction by forms differing from each other in outline, position, and activity. This coloured biological chart (Plate III. *Boston Monday Lectures on Biology*) is only too inadequate an illustration of the complexity of the weaving performed by the bioplasts.

We have as many different parts in one of these tissues as there ever was in lace-work, and multitudinously more. We know that. But Darwin says that, just as every part of a small and simple organism throws off a gemmule, so every part of a complex organism throws off its gemmule. That is, we have a gemmule from this corner (indicating on the blackboard), a gemmule from this, a gemmule from



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this, a gemmule from every one of these subdivided lines; a gemmule, in short, from every cell of this organism; a complexity absolutely appalling to contemplate, for the number of gemmules must be absolutely inconceivable. But although they go out into the circulating fluids of the organism, although in the vegetable world they permeate all the sap in your lily of the valley, they are, nevertheless, collected into the pollen of that flower. Every grain of that dust consists of aggregates of all these gemmules. Therefore, when a pollen grain is subject to the proper environment, the gemmules develope. They all have a number. There may be billions and trillions of them; but no particle forgets its place. The dance of the gemmules is a labyrinth compared with which all the movements, seen and unseen, of all the visible and invisible stars of heaven is simplicity. But these points of matter, with nothing but chemical and physical forces behind them, as Hæckel and Huxley would say, or with nothing but *elective affinities* behind them, as Darwin would say, never make a mistake in a single step. They come together, they arrange themselves, they build a germ that will produce the lily of the valley. They co-ordinate themselves so as to constitute a seed which you cannot develope into anything but a lily of the valley, if the gemmules come from the lily, and into nothing but a palm or a man, if the gemmules have come from these organisms.

Gemmules, it is supposed, will develope only in union with nascent cells, like those from which they came. Here are three cells arranged in a series, and the second grows out of the first and the third out of the second. When all these cells are developed, each drops off a gemmule. But the gemmule produced by the second cell will not develope itself unless it comes into union with a gemmule originated by the first cell and already started in its growth. The gemmule from the third cell must have a corresponding position in relation to the gemmule of the second, or it will not grow. Thus our elective affinities, the complexity of which has already astounded us, need to be raised to a yet more inconceivable height of complexity. We are bewildered under the demands of this theory; but the gemmules are not bewildered. Elective affinity keeps their poor head steady. Each gemmule bethinks itself of its duties, takes its proper place in the swirl of atoms and forces, and, with no co-ordinating power outside of itself, goes unerringly to its destination. There is your theory of pangenesis complete.

Let me now give you Darwin's own language:

"It is universally admitted that the cells or units of the body increase by self-division or proliferation, retaining the same nature, and that they ultimately become converted into the various tissues

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and substances of the body. But, besides this means of increase, I assume that the units throw off minute granules, which are dispersed throughout the whole system; that these, when supplied with proper nutriment, multiply by self-division, and are ultimately developed into units, like those from which they were originally derived. These granules may be called gemmules. They are collected from all parts of the system to constitute the sexual elements, and their development in the next generation forms a new being; but they are, likewise, capable of transmission in a dormant state to future generations, and may then be developed. Their development depends on their union with other partially developed or nascent cells, which precede them in the regular course of growth. Gemmules are supposed to be thrown off by *every* unit or cell, not only during the adult state, but during *each* stage of development of every organism; but not necessarily during the continued existence of the same unit. Lastly, I assume that the gemmules, in their dormant state, have a mutual affinity for each other, leading to their aggregation into buds or into the sexual elements. *Hence, it is not the reproductive organs or buds which generate new organisms, but the units of which each individual is composed.* These assumptions constitute the provisional hypothesis which I have called pangenesis."—*Animals and Plants under Domestication*, Vol. II. chap. x, Am. ed., pp. 369, 370.

Every unit, or cell, during each stage of the development of every organism throws off its gemmules. What smooth language for the multitudinous numbers that must be thrown off! Each stage may mean every three minutes, for a new stage is reached in some rapidly-developing plants in every three times sixty seconds.

"If one of the Protozoa be formed, as it appears under the microscope, of a small mass of homogeneous gelatinous matter, a minute particle or gemmule thrown off from any part and nourished under favourable circumstances, would reproduce the whole; but if the upper and lower surfaces were to differ in texture from each other, and from the central portion, then all three parts would have to throw off gemmules, which, when aggregated by mutual *affinity*, would form either buds or the sexual elements, and would ultimately be developed into a similar organism. Precisely the same view may be extended to one of the higher animals; although in this case many thousand gemmules must be thrown off from the various parts of the body at each stage of development, these gemmules being developed in union with pre-existing nascent cells in due order of succession."—*Ibid*, p. 371.

What are some of the replies to be made to Darwin's hypothesis of pangenesis?

1. The hypothetical gemmules may pass everywhere through the tissues of living organisms. They are inconceivably small.

Charles Darwin calls Lionel Beale "a great authority" (*Animals and Plants under Domestication*, Vol. II. p. 372). I fear some Dar-

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winians who read Beale are not candid enough to agree with their master in that opinion. But when Darwin cites Beale he is so frank as to say that this theory of pangenesis has been opposed most emphatically by Lionel Beale and by Mivart and by Professor Delphino, of Florence, whose suggestions, Darwin says, he found very useful. This great authority, Lionel Beale, of whom we have heard here before to-day, admits that there may be masses of bioplasm too small to be seen with the highest powers of our present microscopes. The gemmules, however, on the theory of pangenesis, must be almost inconceivably smaller than those assumed particles of bioplasm; for every such particle in every stage of growth must throw off a gemmule, and these gemmules from all the bioplasmic points of the body must be collected in a little shifting dust, which we call the pollen of a plant. In your palm and your oak there are millions of bioplasmic points; but, according to Darwin's theory, every unit, that is, every cell, every bioplasmic point, in every stage of its growth, must throw off gemmules, and these must be collected together in the pollen. The gemmules must be inconceivably small to be contained in so narrow receptacles. They cannot be absolutely infinite in numbers, however; for, if so, they could not be nourished. Darwin himself says that, "excessively minute and numerous as the gemmules are believed to be, an infinite number, derived, during a long course of modification and descent, from each unit of each progenitor, could not be supported or nourished by the organism."—(*Animals and Plants under Domestication*, Vol. II. chap. x., Am. ed., p. 396.) Nevertheless, they are so small as to be wholly invisible to the microscope. That is an important point, for it makes the theory one which it is very difficult to disprove. The gemmules are objects of the imagination. How are we to disprove their existence? You may imagine the gemmules floating in the blood and permeating tissues which the blood cannot penetrate. If you are of those who establish their theories by supposing that what cannot be disproved is proved, then you may prove the existence of these gemmules. Nobody can easily disprove the existence of physical masses which the highest microscope cannot perceive. It is all a matter of imagination—the existence of the gemmules—and will be, probably, for ages and ages yet; for no microscopist pretends to see anything as small as these gemmules must be.

One thing, however, we do know—that, if the pangenetic gemmules are inconceivably small, they must pass everywhere through the living tissues. They easily permeate cell-walls. Therefore, in the vegetable kingdom, when the gemmules pass freely from cell to cell, we should suppose that a bud borne by a graft would certainly be affected by the

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gemmules arising in the root and stem of the stock. Such is not the case in many instances. Pips from a pear grafted on a quince stock will not give rise to a hybrid between a pear and a quince. The stone of a peach, grafted on a plum-stalk, will not grow into a tree whose stalk bears plums, while the extremities of the branches bear peaches.

The gemmules of the quince are thrown through the walls of the cells in the scion of the pear, they circulate in its sap, and we should suppose that they would produce a hybrid. But they do not. We know they circulate in the scion, if they are as small as they must be, according to this theory. But we cannot trace them by the effects the theory requires them to produce, if they are there. We find no effects; therefore we suppose they are not there.

2. Pangenetic gemmules might pass everywhere. They can leave the body in the perspiration and the breath. There is no explanation in Mr. Darwin's theory for the presumed fact that they are all collected into buds, pollen, or any one similar receptacle.—(See letter by Lionel Beale in *Nature*, May 11th, 1871, p. 26.)

Pardon me if I expand that point, for the sake of making it clear, for, in our hurry of discussion and want of time, I am perpetually under temptation here to run into obscurity, from condensation. It is assumed that every cell of every tissue throws off a gemmule in every stage of its development. Now, the gemmules are so small that they may be breathed away; they may be perspired away. Your lily of the valley and your palm tossed in the winds may exude gemmules through all their pores. How happens it that the representatives of no one cell are ever exuded or breathed away in any case? Gemmules may go anywhere. But, in spite of all the tossings of the tissues, in spite of all the activities of the tissues in organisms that are constantly in motion, we find no one class of these gemmules lost. If, for instance, the gemmules that come from the lenses in the eye were to be perspired away, or if, as they circulate through the blood, they were to be breathed away, there would be no eye in the offspring. Now, how is it that there is nothing lost out of this marvellously complex mass of gemmules, when they are so inconceivably minute that hunting for a needle in a haymow is plain business compared with looking for a gemmule? This is the best form of the mechanical theory of life, and in the name of theories as wild as this, some of us are asked to give up our belief in the immortality of the soul.

3. The hypothesis makes no distinction between a unit of matter and the unit of force in a living organism.

The individual type of life, or co-ordinating power in a germ or organism, I call the unit of force in that germ or organism. A single

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naked bioplasmic mass is the unit of matter. Cells are not the true units of matter in an organism. If the gemmules are formed by the breaking off of minute masses from the units of matter or naked bioplasts, these will not arrange themselves, unless the unit of force or co-ordinating power of life is left behind them.

It is vastly important, I think, to make a distinction between the unit of matter and the unit of force in a living organism. The unit of matter, at the last analysis we can make in unbraiding the living tissues, is the structureless, naked bioplast. But we know that behind the throbbing, weaving bioplasts there is a unit of force, co-ordinating their motion. As the plan on which they weave preserves its unity in all stages of development of the animal, we conclude that the unit of force behind them preserves its unity. Take as many points as you please, therefore, of these units of matter, and you cannot arrange them unless you have your co-ordinating power behind them; and, therefore, you gain nothing by your theory of elective affinities.

4. The hypothesis of pangenesis involves several untenable subsidiary hypotheses.

Professor Delphino, the justice of whose attack is largely admitted by Darwin, points out eight subordinate hypotheses which are required by the theory and some of which are not tenable.—(See *Scientific Opinion*, Sept. 29th, 1869, p. 366; and Prof. St. George Mivart, *Genesis of Species*, chap. x.)

The gemmules must have the power in certain cases of producing monstrosities; that is, your elective affinities must be capable of being thrown out of their grooves occasionally.

The theory does not account for the fact that sometimes certain gemmules, although nourished like other gemmules, do not develop. A generation passes and the traits of the parents are not in it. In the third generation come out the traits of the grandparents. Why did the gemmules lie dormant so long?

The hypothesis does not explain the inherited effects of the use and disuse of particular organs. "A horse," says Darwin himself, "is trained to certain paces, and the colt inherits similar movements. Nothing in the whole circuit of physiology is more wonderful. How can the use or disuse of a particular limb or of the brain affect a small aggregate of reproductive cells in such a manner that the being developed from them inherits the character of either one or both parents? Even an imperfect answer to this question would be satisfactory."—*Animals and Plants under Domestication*, Vol. II. chap. x., Am. ed., p. 367.

5. The theory of the pangenesis explains everything by the elective

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affinities of gemmules for each other ; but leaves these elective affinities themselves unexplained.

6. According to Darwin's own concessions, many facts in hereditary descent are wholly inexplicable by his hypothesis ; and his theory, "from presenting so many vulnerable points, is always in jeopardy."

7. The hypothesis is rejected by the foremost authorities in the microscopical investigation of living tissues.

8. The theory is not needed, as all the facts it is used to explain are accounted for by defining life as the power which co-ordinates the movements of germinal matter ; and by assuming, what all the facts prove, that this power is transmitted in hereditary descent.

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WHEN the ice breaks up in the St. Lawrence, in the spring, it does not move all at once, but is first honeycombed by the approach of the sun from the south. In the middle of the mighty river an opening appears, where the currents are swiftest; and little by little they shoulder the masses of ice against the shore, piling them sometimes to the height of thirty and forty feet, with a noise of crushing upon each other. At last the river carries to the ocean not a sheet of haughty, solidified water, but of obedient, aqueous fluid, reduced to pliability, moving with the swiftest currents, forgetting that it ever was locked up by the winter, and received into the sea as a part of the shouldering currents themselves. Just so that ice which has covered the surface of a large part of philosophy—that uncertainty as to the authority of self-evident truth, that frigid sheet of speculation which has asserted that conscience might have been another thing had our environment been different—is breaking up. It is being shot through and through by the returning vernal season of confidence in the plan of human nature. The central currents are already in sight. They begin to shoulder the edges of ice. Occasionally a great roar is heard along the banks. The crushing of the blocks has begun. And by-and-bye we shall have this philosophy of Nescience and Materialism, this doubt whether there are any ultimate grounds of certainty, this scepticism concerning the inmost plan of man, melted, running with the great currents, received into the ocean at last, and casting up its gleaming and its exhalation into the face of the sky, with all the tides that God draws upward in the sea.

I am not prophesying in vain, for I hold in my hands the proof that the prophecy is being fulfilled. Stuart Mill and Dr. McCosh were accustomed to walk over this field of ice; and I must show you, before I advance to the physiological side of their problem, how unwilling Mill was to bear his weight on the central ice. He would walk near the shore with a very firm tread; but toward the end of his career, Mill, in his *Examination of Sir William Hamilton's Philosophy*, said: "Whether the three so-called fundamental laws of thought are laws of our thoughts by the native structure of the mind, or merely because we perceive them to be universally true of observed phenomena, I will not positively decide; but they are laws of our thoughts, now and invincibly so. They may or may not be capable of alteration by experience." (*Mill's Admissions*. See

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McCosh, *Fundamental Truth*, p. 75.) He is very shy of that ice. He knew it was getting thin.

Many think Mill asserts that all our fundamental beliefs are the results of our environment, and might have been different had our experience been different; but that is a great misapprehension. He says here distinctly, that the more important of them may or may not be capable of alteration by experience; and that is all he ever would say. If you will read the chapter in McCosh's *Defence of Fundamental Truth*, entitled "Mr. Mill's Admissions," you will find twenty-four of these singular concessions used as scimitars to cut down the haughtiness of the old and now largely outgrown associational philosophy.

But there was one point of the ice where the water came through. Mill would not weigh himself there. He would not trust the weight of a feather there. An elaborately unscholarly newspaper has lately called on me to prove that Mill ever said that any necessary belief—as, for instance, that a thing cannot be and not be at the same time and in the same sense—may be primordial or original in human nature and not the result of mere experience. I have been asked to give the page and line of Mill's writings where he uses this language. Now, if anybody will open the American edition of Mill's *Examination of Sir William Hamilton's Philosophy*, at the eighty-eighth page of the first volume, he will read:—

"That the same thing should at once be and not be—that identically the same statement should be both true and false—is not only inconceivable to us, but we cannot conceive that it could be made conceivable. We cannot attach sufficient meaning to the proposition to be able to represent to ourselves the supposition of a different experience on this matter. We cannot, therefore, entertain the question whether the incompatibility is in the original structure of our minds or is only put there by our experience. The case is otherwise in all the other examples of inconceivability. Our incapacity of conceiving the same thing as A and not A *may be primordial*; but our inability to conceive A without B is because A, by experience or teaching, has become inseparably associated with some mental representation which includes the negation of C. Thus all conceivabilities may be reduced to inseparable association, combined with the *original inconceivability* of a direct contradiction."—(See also pp. 96, 111, 112; and Mill's *Logic*, Book I, chap. vii., sec. 7.)

Mill, in his later career, never would put his foot over this place where the ice of the St. Lawrence was so thin. But we have men in Boston who go in there for a bath.

How shall we account for the unlikenesses of different organisms?

There are five theories for the explanation of the origin of the diversity of form in animals and plants and all that has life. Turning



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from the metaphysical side of the question as to the origin of necessary beliefs, I now am to outline before you the principal theories on the physiological side of that problem in philosophy

Hereditary descent has been explained by one or the other of these hypotheses :—

1. Chemical affinities.
2. Elective affinities.
3. Organic polarities.
4. Inherent movements in bioplasm.
5. Life, defined as the power which co-ordinates the movements of germinal matter.

We have, in the first place, the old Lucretian hypothesis, or atomic theory, that chemical affinities and physical forces explain the origin of form in organisms. In the name of Herbert Spencer himself, we may make short work with that style of materialism. Agassiz used to say that, if only physical and chemical forces are at work in the organisms of plants and animals, we cannot account for the diversity of the types of growth. The chemical units are the same throughout the world. Oxygen is oxygen in the elm and in the palm, in the eagle and in the lion. Hydrogen, carbon, as ultimate atoms, are the same throughout the world, and for all we know, throughout the universe; and, therefore, there is no accounting for the diversity of form in organizations, if physical forces are the only ones at work in them. The old Lucretian hypothesis is so far answered that it needs no longer to be considered in the conflict with materialism. It is not only crass and obsolescent, but among scholars it is obsolete. Let Herbert Spencer, however, be the policeman to give it the last quieting imprisonment. "It cannot be," says Spencer, in his *Biology*, a book now outgrown by the progress of knowledge—"it cannot be," says Spencer, in 1866, "in those proximate chemical compounds composing organic bodies that specific polarity dwells. It cannot be that the atoms of albumen or fibrine, or gelatine or the hypothetical, protein substance possess this power of aggregating into specific shapes"—and he gives the same reason upon which Agassiz insisted—"for in such case there would be nothing to account for the unlikeness of different organisms. Millions of species of plants and animals, more or less contrasted in their structures, are all mainly built up of these complex atoms. But if the polarities of these atoms determined the forms of the organisms they composed, the occurrence of such endless varied forms would be inexplicable. Hence, what we may call the chemical units are clearly not the possessors of this property."—*Biology*, Am. Ed., Vol. I., p. 182.

Many a man who calls himself a Spencerian, but is only a random

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student of his writings, or who has read him with his fingers, more than with his eyes, and heard him with his elbows, rather than his ears, will defend on the street, and sometimes in the newspapers, that obsolescent form of materialism which even Spencer discards. I shall from this point on, take it for granted that the Lucretian hypothesis of materialism is dead.

Next we come to Darwin's theory of elective affinities, or pan-genesis. Allow me to recall the facts which were put before you the other day concerning the complexity of these affinities. We have here a circle, let us suppose, and at its centre there is an atom of matter. According to Darwin's hypothesis, all the movements of matter in living organisms are to be accounted for by the elective affinities of minute particles, called gemmules. Darwin does not in terms deny that the first germs were originated by the Divine power; but it is not necessary for him to do that. Such affinities were put into that original germ that everything we call life has been developed out of the germ. We therefore must determine the qualities of that original living matter by Darwin's definition of elective affinities. Now, how many affinities must there be to account for the movements of a particle of matter to any and every point of a circle drawn around it? Why, just as many affinities as there are points in the circle! You have 360 degrees in your circle, and there are at least 360 points measurable by the microscope in each degree. If the affinities of this gemmule account for all its movements, they must account for its movements in any direction, toward any part of that circle. In constructing the complex whole we call man, the gemmules must move to every part of a circle—up, down, forward, backward. Indeed, we must not only have affinities that will enable the atom to move in every direction inside a circle, but in every direction inside a sphere. I have represented here only a plane surface; but, if there were another circle cutting thus at right angles (drawing a figure on the blackboard), the atom would need to have as many affinities as are represented by the radii of both the first and the second circle. Inside a sphere there must be as many affinities as there are points toward which that central particle will be called or tend in its weaving different physical tissues. Rather a complex set of affinities to belong to one gemmule; and yet Darwin's affinities must thus be complex, or they cannot account for the formation of what we see, what we can touch. Gemmules must be moving in all directions, or they cannot build a hand or an eye. Thus we see that as many dots as can be placed on the inside of a sphere by the aid of the best microscope will not be as numerous as the affinities that must belong to every gemmule, if you are to account for its motion.

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But motion is not the only thing for which Darwin must account. He must explain the self-nourishment of each of these gemmules. They must have therefore as many affinities as there are different kinds of tissues in the organism to which they belong. One gemmule here must take up the matter necessary to produce a cellular integument, and another here that which is needed to produce a lens in the eye, and here for bone, and here for muscle, and so on through the multitudinous forms of tissue. Thus, while we have need of a host of affinities to account for motion, there must be a second infinitude of affinities to account for self-nourishment.

But self-nourishment is not the only thing to be explained by elective affinities. Growth and formative power must be accounted for, and these in every different type of organism must be peculiar. Here, then, a third and fourth infinitude of affinities are needed.

But we must also account for reproduction. We must account for the co-ordination of tissue with tissue. So here are six kinds of incalculably complex labyrinths through which these affinities must wander, without error or bewilderment. Draw circles around each of the other sets of affinities, as you did around the first set, and you will find them just as complex. There must be sphere within sphere; and every one of these affinities must be accounted for by the qualities possessed by the atoms of the original germ from which all life has descended. The affinities must work, wheel within wheel, endlessly; and at last they must bring out a type of being that is a unit, always one thing from birth to death. Destroy the co-ordinating class of affinities, and the others would explain nothing. We reach here, therefore, the necessity of a co-ordinating power,

Profesor Delphino, of Florence, looking with his keen Italian eye upon Darwin's hypothesis of pangenesis, said, as many scholars have affirmed since, that it requires eight subsidiary hypotheses. But not eight only. Eight hundred, rather, are required. There must be these different offices performed by every living thing, and the movement of the gemmules must be accounted for by affinities practically infinite in number. Nevertheless, when we examine the necessities of Darwin's hypothesis of pangenesis, we must include among the affinities of the gemmules a co-ordinating power as effective as what we call life. There must be some power that holds all these gemmules to one plan in their weaving. There is such a power. We know this. Darwin does not deny the existence of this co-ordinating power; but he calls it affinity. It is elective choice among these gemmules. Since, therefore, the existence of a co-ordinating power is conceded, let us fasten the fact in our memory. Darwin meets us at this co-ordinating power which governs the movements of germinal matter.

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We call it life. He calls it an elective affinity. I undertake to assert that there can be no clear statement of Darwin's hypothesis of pangenesis that does not include this co-ordinating power behind the movements of germinal matter. In the facts it acknowledges, the second of the five theories, therefore, is not very unlike to the fifth.

Turning to the third hypothesis, we find Herbert Spencer's famous doctrine of organic polarities. This is not Darwin's theory, by any means, although the latter is often confused with it. In his definitions Herbert Spencer is famous for his felicity of phrases; but not for felicity of thought. Organic polarity is the smooth phrase he uses to describe the cause of unlikeness in organisms. How does he himself define these two words?

Herbert Spencer is a candid man, under the power of a tyrannical theory. His effort is to account for everything in life by matter and motion. He would express everything in what we call vitality in terms of matter and force. When, however, he gives a definition of what he means by polarity, the facts of actual observation trouble him. He says that there is "an innate tendency in living particles to arrange themselves into the shape of the organism to which they belong. . . . For this property there is no fit term. If we accept the word polarity"—I am reading here a chapter entitled "Waste and Repair," in Spencer's *Biology* (American Edition, p. 180-183)—"as a name for the force by which inorganic units are aggregated into a form peculiar to them, we may apply this word to the analogous force displayed by organic units; . . . taking care, however, to restrict its meaning."

Hundreds of loose readers of Spencer think he means by "polarity" just what is meant by it in the range of physical research. He carefully restricts the meaning of the word, and closes his paragraph by this very significant language: "If we simply substitute the term polarity for the circuitous expression *the power which certain units have of arranging themselves into a special form*, we may, without assuming anything more than is proved, use the term organic polarity, or polarity of the organic units, to signify the *proximate* cause of the ability which organisms display of reproducing lost parts." Elsewhere he says that this same law is involved in hereditary descent. By organic polarity, therefore, he always means the *power that certain units have of arranging themselves into a special form*. Well, that is substantially what we mean by a *co-ordinating power behind the movements of germinal matter*. Any man who will attend to definitions—and I have nothing to do but to attend to them—may easily ascertain that the power Herbert Spencer calls organic polarity must be, at the last analysis, substantially the same in effect as life, defined as the

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power which co-ordinates the movements of germinal matter. Come out upon this sheet of ice to the central currents, and you will find Herbert Spencer just as shy, in the range of physiology, as Stuart Mill was in the range of metaphysics, of putting his foot on that central ice. The trouble is that some of you have wandered with Herbert Spencer only up and down the shores, looking at the bank-swallows' nests there, full of snow.

Herbert Spencer himself more than hints that life must go before organization, although in spirit his theory has little regard for that truth. "It may be argued that, on the hypothesis of evolution, life necessarily comes before organization. On this hypothesis organic matter in a state of homogeneous aggregation must precede organic matter in a state of heterogeneous aggregation. But, since the passing from a structureless state to a structured state is itself a vital process, it follows that vital activity must have existed while there was yet no structure. Structure could not else arise."—*Biology*, Am. Ed., p. 167.

The cause must go before the effect. Structured matter is structured by a cause. That cause goes before the structure it produces. The structuring cause Spencer calls organic polarity. We call it life. As far as it makes use of facts, the third theory is, therefore, at the last analysis, substantially the same as the fifth.

In the advance of microscopical investigation we are finding that the great discoveries of the last thirty years concerning germinal matter have forced, even upon materialistic biologists, since Spencer wrote his work, a new definition of life and one approaching yet more closely to that which has been defended here. The latter may be called the established definition. I call it the Aristotelian also, for it expresses Aristotle's idea that life is the cause of forms in organisms. I hold in my hand a recent work representing fresh discussion by French materialists. The book has but just crossed the ocean. It is *Biology*, by Dr. Charles Letourneau—a work well known in French, and translated now into English by Maccall, and constituting the second volume of Chapman and Hall's *Library of Contemporary Science*. Its discussion has a materialistic trend, as any one will see who opens at the strategic points. Always, when you take up a book on biology, turn to the chapter on spontaneous generation. If any man believes in spontaneous generation, he is behind the times. But Letourneau writes, not without courage:

"We are compelled to admit that the first living beings spontaneously organized themselves at the expense of mineral matter.

"The Darwinian doctrine, which results with such evidence from palæontology, from embryology, from the well hierarchized classification of the organisms, demands as its indispensable complement spontaneous

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formation, without germs, without parents, of the first examples of the living world.

"In the scientific domain, any logical and necessary deduction or induction ought to be admitted without contest, though it may shock old ideas and shatter old dogmas."—P. 301.

Here is much more audacity than acuteness. In contradiction to Darwin, and against Tyndall, against Huxley, against all the cautious men in our modern physical research, this representative of Hæckel's school asserts spontaneous generation. He is to be pitied, but needs no reply here.

Nevertheless, when I turn to Letourneau's definition of life—this is the second strategic point in any book on biology—feel the pulse at these two places in any volume on which you cannot spend more than ten minutes—I find Herbert Spencer's definition rejected, in the name of late research:

"The definition of H. Spencer—'The continual agreement between interior and exterior relations'—has the fault of being too abstract and of soaring so high above facts that it ceases to recall them. Besides, just by reason of its vague generality, it might also be applied to certain continuous chemical phenomena.

"It would be better to descend nearer to the earth, and to limit ourselves to giving a short summary of the principal vital facts which have been observed. Doubtless, life depends upon a two-fold movement of decomposition and renovation, simultaneous and continuous; but this movement produces itself in the midst of substances having a physical state, and most frequently a morphological state, quite peculiar to them. Finally, this movement brings into play diverse functions in relation with this morphological state of the living tissues, habitually composed of cells and fibres endowed with special properties.

"Let us say, then, that 'life is a twofold movement of simultaneous and continual composition and decomposition, in the midst of plasmatic substances, or of figurate anatomical elements; which, under the influence of this indwelling movement, perform their functions in conformity to their structure.'"—P. 34.

I consider this late definition an important piece of philosophical news, and it is my business here, as an outlook committee, to put before you all such intelligence on which I can lay hands. This French materialistic writer gives a definition of life very much nearer the one which has been defended here than any in Darwin or Spencer. He calls life, substantially, an internal movement in bioplasm.

Letourneau's definition is too long and has not the usual French grace of expression; but three things are very noticeable in it. First, life is defined as a movement occurring at its earliest stage "in the midst of plasmatic substances," by which he means bioplasm. Thus he confines life at its outset to germinal matter. Spencer's definition

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does not thus limit life. Second, Letourneau speaks of movements in "figurate anatomical elements" as life; but elsewhere recognizes the fact that these elements obtain their figurate character by the agency of bioplasm. Lastly, Letourneau's definition points out the existence of a co-ordinating force. The figurate elements and plasmatic substances "perform their functions in conformity to their structure."

Thus, in the progress of discovery, the latest definitions of life approach more and more nearly to the Aristotelian. At the last analysis, this French materialistic definition, which calls life "a movement in plasmatic substances," implies all that has been asserted here in the definition of life as the power which co-ordinates the movements of germinal matter. The movement in plasmatic substances must have a cause, and this we call life. Notice the gradual approach of science to that definition. The progress of microscopical research has forced materialism forward to this final breaking up of the ice. The Lucretian theory is ice on which no man dares to stand. Darwin's elective affinities and Spencer's organic polarities lie at spots where men already hear the ice break. In Letourneau's definition the swift central currents begin to pile the ice up on the shore. In Beale's, Lotze's, and Ulrici's, as well as Aristotle's definition, you have the clear, open stream.

What bearing has this definition on the question as to the origin of conscience? How far has the definition a practical application in reference to the authority of self-evident truth? See, there is a stack of books—I might have piled it half as high as the roof of this temple—turning on the inquiry whether conscience is really final authority, whether it results from the plan of our nature, or whether it might not have been different had our environment been different. On the physiological side here is another stack of books, that I might have piled half as high as the roof of this temple, and turning in large part upon the same question.

1. None of the five theories, except the fifth, account for man's sense of unity and identity.

2. The theory of life, therefore, is the only one that covers all the facts in the case.

3. Lionel Beale does not hesitate to say that "the vital power of the highest form of bioplasm in nature is the living I."—*Bioplasm*, p. 209. London, 1872.

4. Even Spencer and Darwin are obliged to use the word innate.

5. Since a structuring power must exist before anything can be structured, the plan of the body is innate in its co-ordinating or structuring power.

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6. The plan of the soul, including its necessary beliefs and the conscience, is also.

7. There are, therefore, innate tendencies not derived from our environment; there are primary beliefs, intellectual, and ethical, and æsthetic, inhering in the plan of the soul.

8. The pretence that the conscience and the mathematical axioms are merely the inherited effects of environment and experience, and might have been different had experience been different, is thus answered.

The established definition of life as the power which co-ordinates the movements of germinal matter proves that there was a plan in the cabin of the "Mayflower," before any sailors landed. In the original structure of the soul we find the origin of necessary beliefs, and the divine revelation of self-evident truths. Conscience is a primordial power. Our necessary belief that there is a distinction between a whole and a part and right and wrong motives would not have been different had our environment been different. The progress of research, in justifying more and more the Aristotelian definition of life, causes at last the icy congealments of the river of philosophical speculation to break up. We shall need, twenty-five years hence, I think, no discussion with those who do not recognise in fundamental truths authority entirely beyond experience. "Primordial," as Mill says; "original," as French Materialism says; "fundamental," as McCosh says; "innate," as Spencer says—the primordial, original, fundamental, innate, self-evident truths will be victorious when once the course of scientific discussion has shouldered the heavy masses of its ice into the middle of the stream. The correct scholarship of the world is a clear river there already; and on it—the swift, central, enduring current—I advise you to launch your fortunes.



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### PRELUDE.—THE IMMORTALITY OF THE SOUL.

TWENTY learned men—ten English and ten German—assembled as a modern symposium, are walking up and down on the wall of Göttingen. Listening to their discussions, we find it impossible to understand their references to the complex whole of a man's nature, unless we adopt Luther's division of the human being into three parts—body, soul, and spirit. We have been accustomed to speak of man as body and soul only, and to make no distinction between soul and spirit. We have used a two-fold, but Delitzsch and Schöberlein employ a three-fold division of man's nature. When we recollect, however, the Biblical language, we find that Luther had warrant for saying, as Delitzsch on the wall of Göttingen quotes him, that the Scripture divides man into three parts. "God sanctify you, through and through, that thus your whole *spirit*, *soul*, and *body* may be preserved blameless." Luther in his exposition of the "Magnificat" for the year 1521 says that Moses made a tabernacle with three distinct compartments. The first was called *sanctum sanctorum*, within which dwelt God, and there was a divine light therein. The second was *sanctum*, within which stood a candlestick with seven lamps. The third was called *atrium*, the court, and it was under the open heaven, in the light of the sun. In the same figure a Christian man is depicted. His spirit is *sanctum sanctorum*, God's dwelling-place. His soul is *sanctum*. There are seven lights; that is, all kinds of understanding, discrimination, knowledge, and perception of bodily visible things. His body is *atrium*, which is manifest to every man, that it may be seen what he does and how he lives. Thus taught St Augustine, also, and many an accredited Biblical scholar before Luther.

This Delitzsch who is speaking is a professor at Leipsic University, and has written a renowned work on *Biblical Psychology*. From beginning to end of it he introduces as authority nothing but the Scriptures, and he adopts this three-fold division. By the spirit is meant the conscience, or that portion of human nature in which there is a light; not of us, although in us. We have spoken of the conscience as containing something which is not of us; and we might have used the word spirit in the same sense. The soul is the link between spirit and body, and contains all the psychical powers except the conscience. That triple division of man is Schöberlein's also. But it would matter very little whether it were Schöberlein's or Delitzsch's, if it were not Biblical. It would matter very little, even if it were Biblical, if it were not natural. But it happens to turn out that Ulrici and many others of his school, who are given to the investigation of man from the light of merely natural science, adopt just that division as the outcome of their research from the point of view of mere reason. Ulrici,

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as we have seen in previous listening to him and to Lotze, speaks of a body of a physical sort, then of a third somewhat—an etherial enswathement of the spirit, a spiritual body—and lastly of spirit itself. Thus the three-fold division of man is adopted not only by the biological but by the theological teachers—by the former in the name of exact research under the microscope and scalpel, and by the latter in the name of a careful dissection of Scriptural texts. It is a sign of the times here on the walls of Göttingen when our Delitzsch, who has given himself to exegetical study, comes out with precisely the same idea of the three-fold division of man at which Ulrici has arrived by the methods of mere reason.

The English symposium has been accustomed to a narrow view. Frederick Harrison does not believe that there is in man any spiritual activity not connected with changes in the matter of his present physical body. He cannot imagine it possible that there is in man a soul, having the power of existence apart from molecular change. Professor Huxley, here, although he will not assert in definite terms as much as Harrison has done, holds, nevertheless, that we are sure absolutely only of the existence in ourselves of two sets of phenomena—one physical, and the other mental or moral. He suspects that the physical may be shown to be antecedent to the moral, and that as antecedents they are properly to be regarded as the cause of the moral. At the last analysis Huxley is ready to attempt a physical explanation of moral phenomena. Harrison objects to that. He thinks the physical side the unimportant one in man, if either side is unimportant; but Huxley thinks the physical side the important one. They put rival emphasis on these different sides of the lower half of man, and do not appear to understand how different the outlook is the moment we rise to the German point of view and make man to consist of three things, instead of two.

Here we have three wheels—a large one, a smaller within the first, and a smallest within the second. Suppose that they touch each other by cogs. Of course, if they all lock into each other, when you roll the inner wheel, you will roll the second and in that act you will roll the outer. In the reverse direction, you may roll the outer, and you will roll the second, and so the inner wheel. Delitzsch and Schöberlein and their schools think of man as spirit, soul, and body. The spirit is the innermost thing in the holy of holies. The soul is something midway between spirit and body. Nevertheless, it is subject to influences from both the soul and the body. Influences can go from the outside to the innermost of man, and from the innermost to the outermost. When a man is filled with lofty moral emotion, we find visible effects produced in his countenance. There is a perfectly demonstrable result, coming from the activity of what the Germans call the spirit within the man. This inner wheel can move the wheel into which it locks, and that can move the outer. It is very evident that the two inner wheels may be taken out from the outermost wheel, and yet continue their action and inter-action. If the second wheel had the power of assuming to itself an envelope, or outer wheel, it might in another state of existence do so, and the fundamental plan of the wheels not be changed at all. We are more and more drawn by German biological and

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theological research to this three-fold division of man as explaining the union between spirit and matter. We are led to the idea that there may be a third somewhat—a spiritual body affected from without and affected also from within, and acquiring power from its contact with the spirit to clothe itself, even when the present physical husk has been dropped off.

However, we are talking too much for listeners. It becomes us here to depend on a wealth of exact citation; for we must not misrepresent by the breadth of a hair either the German or English philosophy. Delitzsch speaks with a face full of radiance: "The power of life, that inconvenient and yet indispensable conception of exact investigation, is something exalted above the physical forces of attraction and repulsion. How much more, then, is the conscious soul, and still more the self-conscious spirit! Force, life, soul, spirit form an ascending climax."—(*Biblical Psychology*, T. and T. Clark's *Foreign Theol. Lib.*, p. 93). "Samuel, who came up out of Hades, had, therefore, form and clothing as he had had in this world; and when on the Mount two men approached Jesus, the glorified appearing likewise, and spoke with him, the disciples immediately recognised them as Moses and Elias. They appeared, therefore, in an external form corresponding to their temporal history, and were, therefore, unmistakable. But this external form is a spiritual one. By virtue of an internal power, spirits give themselves external human form when they make themselves visible to whom they will. The external appearance is the immaterial product of their spiritual nature."—*Ibid*, p. 100.

"Are we at all to conclude thence that the dead even before their resurrection, and without awakening of their bodies, are not able to appear again? The appearance of Moses and Samuel proves the contrary.

"We believe that the spirits of the departed are even in themselves not without a phenomenal bodily form.

"The soul of the spirit, we say, with Göschel, after the separation from its body, is not wholly without a body; the inward body follows it.

"The soul is the *doxa* of the spirit; immaterial, but similarly formed to the body, which the spirit through it ensouls. It is, as the outside of the spirit, so the inside of the body, which in every change of its material condition maintains it in identity with itself."—*Ibid*, pp. 502-504

What am I reading? The book of an erratic? I am citing the renowned work entitled *A System of Biblical Psychology*, by Delitzsch, years and years professor of theology at Leipzig University; and this volume is translated in the very famous theological library issued by T. and T. Clarke, of Edinburgh. It is a book crowned and recrowned through edition after edition.

Huxley and Harrison look on the faces of Ulrici and Lotze, whom they recognize as men adequately informed concerning physical science, and are amazed that the broader German outlook leaves no opportunity for dissent, even from the side of physical research. Some of us who are not trained in this philosophy think that by this interpretation of Nature and Revelation the doctrine of the resurrection of the same body is imperilled. But Delitzsch speaks again, with the Scriptures open before him and with reverent voice: "The restoration of the human body results when God the triune supplies to the soul from the then glorified world of Nature materials

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for the new formation of its body, similar to those of which its earthly body was formed and with which, when the soul impresses upon them the form of its inner spiritual body, its spiritual nature may attain to full manifestation even in the external body.”—(*Ibid.* p. 537.)

Delitzsch cites Schöberlein and looks into the face of the great Göttingen professor for assent to these propositions. They sound very strange, and we shall have them denied by Schöberlein, in the name of theological research, if they do really come into conflict with the accredited doctrines of the Resurrection. But, instead of denying the position of Delitzsch, Schöberlein replies, with the Scriptures open before him: “The souls of the departed will be clothed with glorified bodies. There will be brought to the soul, out of the transfigured world, materials analogous to the substance of its previous body; and upon these materials the soul will then impress the traits of its germinate body, so as thus to attain to full objective expression. In the case of those still living at the second coming of Christ, the process will be that of a simple transformation. Thus, even as Christ arose with the buried body, so such persons will then appear in the ‘same’ body which was laid in the grave. And this identity holds of the whole essence of the body, both its primary features and form and also its substance. As to whether this identity of materials implies that of the chemical elements or even the identity of the ultimate atoms is a question which loses all significance so soon as we reflect that these elements and atoms themselves are in turn composed of invisible forces, and that in order to become integral parts of an organism they must be dissolved back into these forces and then arise out of them under a new form.”—(See Prof. La Croix, *Translation of Schöberlein, Meth. Quar. Rev.*, Oct., 1877, p. 698.)

Why, to these Germans matter is only visible force. The body itself, and all other substance that we call matter, are a revelation of Almighty God. All matter, as surely as all finite mind, originated in Him. As the azure sky, in which we see nothing, throws out from itself both the cloud and the lightning, so the unseen universe gives rise to the visible universe. We have invisible electricity in the air; we have invisible moisture there. The sky puts forth a fiat, and there is a cloud. It puts forth another fiat, and there is in the cloud electricity. So, I suppose, Almighty God evolves the seen universe of matter and the unseen of finite force from Himself. It is not my belief that everything was created from nothing, nor do the authors of *The Unseen Universe*—perhaps the most suggestive book lately published on these intricate themes—affirm that. I am not asserting Pantheism. It is said that an eminent naturalist, of Orthodox opinions in religion, has publicly proclaimed that this platform teaches Pantheism. He might as well call Mr. Philips an eminent pro-slavery orator. Scholars in this audience are amused by such a charge. Whoever asserts the Divine Transcendancy above Nature, side by side with the Divine Immanency in Nature, and maintains the Divine Personality, may emphasize, as Martineau and M’Cosh and a score of recent writers have done, the doctrine of the spiritual origin of force, and yet not fall into Pantheism. If any naturalist does not know that fact, his blundering in philosophy is probably the result of his absorption in his own speciality.

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We find, however, that these Germans are not to be frightened even with the breadth of the Scriptural outlook. Our listening to Schöberlein ought to be intense after Delitzsch has referred to him; but we find Dorner referring to him and Julius Müller and Kahnis and Luthardt. There is more than one hero in scholarship leaning with massive arm upon the discussions which have been put forward by Delitzsch and Schöberlein and Ulrici and Lotze on these overawing themes.

If it be suggested that in the glorified universe there will be a restoration of other beings besides man, what shall we say? We are not called on to say anything in this German symposium; but Schöberlein is. I am anxious to have you push him to the wall, if you can. I am willing you should ask him definitely whether he thinks any other part of the present world besides man's body will ever have a transfiguration in the next world. Schöberlein is not reluctant to speak even on that theme, most delicate of all. "Christ, by the spiritualization of His body, as taken out of the bosom of Nature, has already consecrated Nature itself to an ultimate transfiguration. On the basis of this beginning, therefore, will the Holy Ghost bring forth out of the bosom of the perishing world a new world: not another, but the same world in a transfigured form, even as the raised body of Christ was not another, but the same in a transfigured condition. And Nature, as thus renewed, will exist under the antithesis of heaven and earth, a 'new heaven and a new earth.' And the whole circle of natural objects will also come forth from death as integral parts of the new eternal state of things."

Do you say this is not definite enough, and do you wish more perfect information concerning the transfiguring of forms of life not human? In a passage which I have before me Schöberlein asserts as his view that the new heavens and the new earth will be such as Agassiz anticipated:

"As with Nature in general, so with natural objects in particular. There will be nothing desert or waste; but the Divine breath will pervade all things. Vegetation will exist in ideal beauty. Greed and hostility will find no place in the animate realm. The wolf will 'lie down with the lamb' in unbroken peace. In general, all primitive forms of existence will reappear in ideal perfection. Man will enjoy Nature through all of his senses. The paradise that existed before will be restored after redemption.

"We are sown in weakness, but we 'rise in power.' There will be no alternation of work and rest, of vigour and weariness; but we shall subsist in ever-full vigour and enthusiasm.

"Whereas in this life we consist of the three elements—body, soul, and spirit—which may even be separated from each other; in the heavenly life the body and soul will be so pervaded with spirit that the entire human being will present but one unitary spiritual life.

"When all is thus transfigured, then *pure beauty* will reign. Heaven is the true home of beauty. For the essence of beauty consists in this—that the life of the soul beams perfectly forth from the body, and that the body thereby sheds a halo of glory back upon the soul. *All true art is a groping after heavenly ideals, and all art-works are anticipations of future spiritual realities.* But in the 'yon side' each human being will be a living art-work, and the life of communion among the saints will be an eternal evolution of holy art-life.

"Wherever the soul may will to be, there it will be able to be. Hence

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the body will not be a prison; but, on the contrary, a *free* home for the soul.

"The body will be the perfect servant of the soul; hence, it will be capable of instantly following and keeping pace with all the outgoings of imagination and thought. The law of love, whereby we live in those on whom we fix our heart, will be perfectly reflected in the body. The indwelling of soul in soul will be also an indwelling of body in body. And in this each will find his due place—so that, even as the Church of Christ here forms but one body with many members, thus also hereafter saved humanity will form but *one organic body*, whereof we shall all be members, each in his place. And of this organic whole the head, the focal point, the sun will be Christ himself. As our souls will eternally live of His life, so our bodies will eternally shine in the radiance of His glorified body.

"Our bodies are not mere caducous husks, to be thrown off when the soul is ripe; but Nature and the Kingdom of God, the rational soul and the human body belong normally and essentially together. When the one is transfigured, the other is transfigured. And when, at the goal of moral development, they are risen to integral unity, then they persist, through eternity, as intimately united as form and substance, light and colour."

Frederick Harrison here has talked of the eternity of the tabor. Adopting the principles of the *Nirvana* of the Brahmins, he has affirmed that an eternity of conscious self-existence can be only torture. "A mystical and inane ecstasy," he says, "is an appropriate ideal for a paradise of negations, and this is the orthodox view; but it is not a high view."—*Nineteenth Century*, October, 1877.

But Schöberlein, unabashed in the company of German learning, replies: "When the soul has reached its perfection in God it will need at once to enter upon a course of untrammelled holy activity, even as God, whose image it is, himself eternally 'works;' and to this creatural need of a field for work the world of Nature offers the requisite scope."

On the wall of Göttingen, our disputants having paced through the whole night, the dawn now begins to cast its radiance. Above the low German meadows and in the trench at the foot of the wall lies a tracery of morning vapour. The summit of the wall is in sunlight. The lark is rising out of the fields. Our spirits are carried up by its flight to the inquiry whether we will adopt a higher or a lower philosophy—that is, wideness or narrowness of outlook. This comes to be the final question between the English and the German learned men. All they in this group who will not use the higher and the wider outlook which divides man in a three-fold way agree to take physically a position symbolizing their attitude spiritually. Frederick Harrison walks down into the trench under the fog. He is a positivist. He believes in what he can touch. The only immortality for him is posthumous influence. But his doubt results from his narrowness of outlook. Long ago those who sit half way up the slope leading to the wall from the trench have outgrown that narrowness. They do not as yet divide man in a three-fold way; but think that there are body and soul in man, and so are delivered from that style of mental unrest into the midst of which even William Greg must dip, as he takes his position. He knows not what to believe. He is now in the vapour, and now in the sunlight. Professor Huxley must walk down, too; and, although the vapour will not wreath his forehead, it will cover

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his feet, for the positivist and the materialistic evolutionist do not stand far apart. But Lord Blanchford, Lord Selborne, Mr. Hutton, Canon Barry, and all the rest of this English group, three of them only excepted, stand here on the summit of the wall, with Delitzsch and Schöberlein and Ulrici and the whole German group. They believe that man is three-fold, and their breadth of outlook delivers them from the obscuring power of the vapour which broods only over the trenches. The lark continues to sing. There comes falling through the ether a divine voice: "Narrowness is the mother of unbelief. Obtain a broad outlook, would you agree with God in your philosophy and be able to transmit God's own thought into life."

### THE LECTURE.

It has been well said that the question as to the origin of conscience has the same relation to modern philosophical discussion of religious truths that Bœotia had to the geography of Greece. That province was the key to the whole land. It became, consequently, the very dancing-plot of Mars. We have had many a theory put to such straits in explaining the single syllable *ought* as to assert with Bentham that, "if the use of the word is admissible at all, it ought to be banished from the vocabulary of morals."—(*Deontology*, I. p. 32.) The distinction between the desirable and the dutiful is a fact, however. The desirable is merely the optional; the dutiful is the imperative. The most characteristic element in the latter can never be explained solely by the former. The theories which derive the dutiful from the desirable have in all ages had insuperable difficulties in discovering a basis for moral obligation. The upholders of utilitarianism have to this hour reached no real unanimity on this central point. Bentham went so far as to deny the existence of duty. "It is, in fact, very idle to talk about duties. The word itself has in it something disagreeable and repulsive."—(*Ibid*, p. 10.) The angular, sharp, erratic Shopenhauer suggests that conscience is composed of five elements—fear of man, superstition, prejudice, vanity, and custom.—(*Grund Probleme der Ethik*, p. 196.) Even David Hume, however, could say that "those who have denied the reality of moral distinctions are to be ranked among the disingenuous disputants; nor is it conceivable that any human creature could ever seriously believe that all characters and actions were alike entitled to the affection and regard of every one."—(*Inquiry Concerning the Principles of Morals*, Essays, Vol. II. p. 223.) Profit a man may disdain; but duty has a commanding presence. We can refuse to do our duty: but we are unable to deny its authority over us in right. *De jure* conscience always rules, although *de facto* it may not. All languages recognise the distinction between profit and duty, the desirable and the dutiful, mere expediency and the right. These great phenomena in language have their natural

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causes as much as anything in a fossil. They are facts. They are hard, unmistakable, enduring circumstances in human experience. The question as to the origin of conscience is not only a vastly more important one than the inquiry concerning the origin of species ; but it is one that can be investigated by the scientific method almost as readily. I enter on the dancing-plot of Mars here for the first time. Many of you may have thought, as some public writers do, that I have dodged this topic. I have postponed it, in order that I might bear the whole brunt of its onset, after discussing the moral sense in detail. Having shown what conscience is, I now, with some profit, I hope, may raise the question : How did it originate ?

If you are satisfied that Darwin's hypothesis of hereditary descent, or pangenesis, requires in the gemmules innate powers or affinities that amount to as great a mystery as what we call life, then you will be convinced at the outset that conscience must have been involved in the original capacities of that first living matter out of which, according to your theory, all animal forms have been evolved. If you are an evolutionist of the extreme type, I will not say of the extremist or materialistic sort, you may yet hold that conscience is in the constitution drawn up in the cabin of the 'Mayflower,' before the ship landed ; and I, for one, shall have no great quarrel with you if that is the form of your evolutionistic philosophy. But Darwin has put forth a special theory of conscience. He has endeavoured to show how the moral sense, as it exists in man, may have been developed exclusively from the faculties possessed by animals. He makes conscience only another name for the operation of the social instincts conjoined with the intellectual powers.

Whenever an instinct is not satisfied, a feeling of unrest arises. If, for instance, the desire for food is not satisfied, we are left in unrest. Every instinct has a pleasure connected with its gratification, and a pain in the absence of its proper food. Just so the social instincts have pain behind them, when they are not gratified. Darwin's central proposition in his discussion of the moral sense (*Descent of Man*, Vol. I. chap. 3) is that he thinks it "in a high degree probable that any animal whatever, endowed with well-marked social instincts, would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well developed, or nearly as well developed, as in man." Thus Darwin derives conscience from the combined operation of the social instincts and the intellectual faculties. He makes remorse of conscience to be only the feeling of dissatisfaction a man has when the social instincts are not satisfied. He would have us explain the feeling that we are to blame by the fact that we are not satisfied in our social instincts.



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What are some of the more important objections to Darwin's theory of the origin of conscience?

1. Darwin teaches that "man comes to feel, through habit, that it is best for him to obey his more persistent instincts." But, in the same connection, he affirms that "the wish for another man's property is, perhaps, as persistent a desire as any that can be named."—(*Descent of Man*, Am. ed., Vol. I. pp. 88 and 89.) Two pages before the first of these sentences I find the second one. The context shows that instinct and desire are used here as synonyms. To convince yourself of this, read ten pages in Darwin's famous chapter on the moral sense. Theft and robbery, therefore, if we are to be logical, are to be justified on the basis of Darwin's theory that to follow conscience is to obey our more persistent instincts. As Professor Calderwood, of Edinburgh University, has said: "Neither a good morality nor a doctrine of personal obligation can rest on this basis.—*Handbook of Moral Philosophy*, p. 147.

The strength of an instinct depends on two things—the persistency of the desire it represents, and the vividness with which we recall the pains or pleasures arising from the desire. Hunger, for instance, is an imperative desire; but when satisfied its pains cannot easily be recalled in memory. It has often been remarked that our painful sensations are reproduced in imagination less easily than our pleasurable. Now, this desire for another man's property, Darwin affirms, has in unsurpassed fulness the first part of strength—namely, the persistence of the desire. "It is," he says, "perhaps as persistent a desire as any that can be named." But there is another part of its strength, and that is the vividness with which we can recall the pains or pleasures arising from it. Darwin affirms concerning that part of its power only that "the satisfaction of actual possession is *generally* a weaker feeling than the desire of possession." He thus implicitly admits that sometimes it is not a weaker feeling than the desire. Well, then, if *sometimes* it is not a weaker feeling than the desire, of course, both parts of the strength sometimes belong to this impulse. If, therefore, the most persistent and strong instinct *ought* to be followed, as Darwin says, then sometimes our desire for another man's property ought to be followed. Darwin explicitly teaches that man comes to feel, through acquired and perhaps inherited habit, that it is best for him to obey his most persistent instincts. "*The imperious word 'ought' seems merely to imply the consciousness of the existence of a persistent instinct.*" We hardly use the word *ought* in a metaphorical sense when we say hounds ought to hunt, pointers ought to point, and retrievers to retrieve their game."—*Ibid.* p. 88.

Here, therefore, is an instructive example of a lack of metaphysical

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and philosophical training in a renowned naturalist. Again and again this fallacy has been pointed out. It is not brought forward here to-day for the first time. Many discussions have exhibited just this strange bewilderment in Darwin's reasoning. Undoubtedly this writer is an expert in observation. Darwin has a massive head in what the books call the observing faculties, but not a very massive one in the philosophical faculties. I am using for the brain only that outline chart which Professor Ferrier's latest researches seem to justify. Darwin's books, however, are the best map of his own spirit—perfectly honest, candid as the noon, a mass of facts which are a mine for whole generations to come within the field of biological research, and yet not remarkable for the philosophical traits prominent in the writings of a Hamilton, a Kant, or an Aristotle.

Read Von Hartmann's late criticisms on "The True and the False in Darwinism."—(*Journal of Speculative Philosophy*, October, 1877, and January, 1878.) You would have the very latest light, and so let me ask you to take Boston as a guide. And what part of Boston? Why, every man here is a philosopher. The other day I went into a renowned establishment for the shortening of the hair. The barber said to me, during my visit three months ago: "Do you know that Hartmann is to publish soon, in a philosophical magazine in St. Louis, an article on the defects of Darwinism?" "No," said I, and stared to find that information at the street-corner in Boston. But I remembered that I was in Boston, and so excused my ignorance; for every one here is expected to know whatever goes on in all the four zones. A detailed conversation followed concerning Kant and Hegel. Last week I called again upon my philosophical friend, and told him I had looked into the *Journal of Speculative Philosophy*, published in St. Louis, and seen the article in the last number. "Yes," said he; "but it is a second one." I consoled myself by reflecting that, even if the mayor of Boston had ceased to speak Latin, my friend of the razor in that city knows all the freshest philosophical news.

Read Virchow's recent reply to Häckel:

"Only ten years ago, when a skull was found perhaps in peat or in lake dwellings, or in some old cave, it was believed that wonderful marks of a wild and quiet undeveloped state were seen in it. Indeed, we were then scenting monkey air. But this has died out more and more. The old troglodytes, lake inhabitants, and peat people turn out to be quite a respectable society. They have heads of such a size that many a person living would feel happy to possess one like them. . . . On the whole, we must really acknowledge that all fossil type of a lower human development is absolutely wanting. Indeed, if we take the total of all fossil men that have been found hitherto, and compare them with what the present offers, then we can maintain with

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certainly that among the present generation there is a much larger number of relatively low-type individuals than among the fossils hitherto known. . . . As a fact, we must positively acknowledge that there is always a sharp limit between man and the ape. *We cannot teach, we cannot designate it as a revelation of science that man descends from the ape or from any other animal.*"—*Nature*, Dec. 6th, 1877, pp. 112, 113.

If you will allow me to affirm that Darwin teaches, at the outset of his discussion of the moral sense, propositions that would undermine the whole doctrine of personal obligation, I shall have said enough to make you cautious in adopting that theory of the origin of conscience.

2. In Darwin's attempt to trace the development of conscience from purely animal instincts, ideas of morality drawn from other sources slip into the argument.—(See this criticism developed in Newman Smyth's *Religious Feeling*, and in St. George Mivart's *Genesis of Species*, and in various other writers.)

The atmosphere in which he conducts his experiment is full of germs of the moral sense. It has been well said that they who try to prove spontaneous generation to be a fact usually perform their experiments in an atmosphere saturated with the germs which they wish to develop.

Darwin's calls to his aid, in explaining the origin of the moral sense, a great number of floating moral germs. I have singled out twelve of these, and hardly need do more than name them in his language.

(1.) "Highly developed mental faculties." That word *mental* is very vague. If by mind you mean the whole spiritual equipment of man, as you sometimes do, it includes moral perception; and so surreptitiously, or, at least, unobserved, comes in the very idea of which Darwin would explain the origin.

(2.) "The feeling of dissatisfaction." That is another vague phrase. It might mean moral dissatisfaction.

(3.) "The power of language."

(4.) "The idea of the good of the community." A very vague phrase, that never would pass without being challenged under the microscope of metaphysical research.

(5.) "The power of public opinion."

(6.) "Obedience to the wishes and judgments of the community."

(7.) "Feelings of love and sympathy." These often mean much more than merely social instincts.

(8.) "Power of self-command." Of course, there inheres in the very idea of self-command the idea of a distinction between motives. A clear choice among motives involves moral perception of the dif-

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ferent character of motives, as good and bad. And so, under that phrase, "power of self-command," may easily come in the very idea of which the origin is to be explained.

(9.) "Appreciation of the justice of the judgments of his fellow-men." There Darwin has the great word justice; but all languages recognize a distinction between the just and the merely expedient. A perception of what is just in motives is an act of conscience. Darwin allows this atmospheric germ to drift into his experiment. Appreciation of justice! Why, that is conscience, and that is the very thing you are about to develop here by spontaneous generation.

(10.) "Appreciation of justice, independently of any pleasure or pain felt at the moment." All these phrases are Darwin's. This last is not a poor description of one of the fundamental activities of conscience. Justice cannot be perceived at all without the power of perceiving the difference between right and wrong; and to perceive that, without any regard to the pleasure or pain felt at the moment, is the key of what we call conscience.

(11.) "Avoidance of the reprobation of the one or many gods" in whom the individual believes. Why, the sense of the divine comes to us from conscience, and that germ is more dangerous than any of the ten that have preceded it; but here comes one yet more dangerous.

(12.) "The fear of divine punishment."

Well, now, if you will give me all these germs, if you will let them drift into my bottle in which I am required to produce by spontaneous generation conscience, I shall have no trouble with that experiment.

These are phrases out of Darwin's famous chapter. You are to look them up for yourselves, and, if you are not thrown into scientific unrest as to Darwin's theory by such an amount of carelessness in his experiment, I shall say that you are accustomed to a loose application of the scientific method, worse than I have been taught, under even the mediæval and mossy instruction of Andover.

3. *What ancestors do not possess offspring cannot inherit.*

4. *The moral sense, therefore, cannot be inherited from a non-moral source.*

From my point of view, these two propositions are the most important in the whole range of investigation as to the origin of conscience. Our only safety in reasoning is to begin always with absolutely undeniable propositions, and then to make only such inferences from them as are axiomatically clear. I think these two propositions are clear; and from them may be made inferences that undermine the foundations of every merely derivative theory of the origin of the moral sense. Darwin's hypothesis assumes that the moral sense is

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inherited from a non-moral source. His scheme of thought, therefore, makes the stream rise higher than its fountain, or involves the assertion that there can be an event without a sufficient cause.

Mix gunpowder and fire, and the result will be an explosion. Therefore, a careless observer might say that the explosion was in the gunpowder and the fire. This is not the case, however. A third and viewless element, the air, combines with the gunpowder in the explosion and is necessary to its explanation.

Mix the social instincts and the intellectual faculties, says Darwin, and the result will be conscience. Therefore, a careless observer might say conscience was in the social instincts and the intellectual faculties. This is not the case, however. A third and viewless element, the moral law, or the nature of things in their moral relations, combines its activity with that of the social faculties and the intellect, and must be taken into view in every explanation of conscience.

5. According to Darwin's theory, pain comes to conscience only when some persistent instinct is left unsatisfied, and, therefore, the essence of all conscientious action is simply the pleasurable. In natures badly organized the vicious is often demanded by the most persistent instincts. The vicious, therefore, in these natures is the conscientious in Darwin's sense; but this reduces the theory to absurdity.

6. It follows from Darwin's definition that the pleasurable, on the whole, is that which conscience justifies. Darwin's theory makes no adequate distinction between the pleasurable, which is always only the optional and the dutiful, which is always the imperative. It does not explain the commanding force of the word ought. It does not account for the axiom *Fiat justitia ruat cælum*—let justice be done though the heavens fall.

7. Darwin himself concedes that his chief source of doubt with respect to his own theory of conscience is that senseless customs, superstitions, and tastes—such as the horror of the Hindu for unclean food—ought, on his principle, to be transmitted, and they are not.

One rule of science is to look in the misty places which a theory will not explain for new light. Wherever there are unexplored remainders, we are likely to find new truths. Now, Darwin confesses that this vast range of senseless customs, superstitions, and tastes is not under the law of inheritance, and ought to be, if his theory is correct. What if a man has been made so much better than a clod that a good angel, stepping on him, leaves an imprint that is not easily washed out; and a bad angel, leaving a bad imprint there, soon finds

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that the plan of human nature has reacted against the impression thus made, and that a sense of justice has wiped out, as with a sweeping billow, the track of his hoof, and left the shore clean as God made it? You would judge in that case that the shape of the shore has been determined by some other power than the impact either of good feet, or of split hoofs. There is a plan in the sands. They are not sands, they are a soul.

## **MARRIAGE AND HEREDITARY DESCENT.**

WHEN there comes together at noontime in a busy city a great audience, expecting only dry, analytical discussions, it is complimented if the speaker begins with difficult matter. I am to discuss marriage in its relations to the laws of hereditary descent. The first question which the mystery of the arrival of a human being on this planet suggests is: When did its soul come into connection with its body? While we face that inquiry we stand in the holy of holies of modern research, and I shall not ask you to take as a high priest there any American or English philosophy. I shall adhere to the rule of this lectureship, and give you what I suppose to be the best on the globe within the range of our field of investigation, and not merely the best on this side the Straits of Dover.

Let me, therefore, outline rapidly before you Hermann Lotze's answer to the question: When does the soul unite with the body? The philosophy taught here is not that of Lionel Beale, nor that of Lotze exactly. I used Beale's facts very largely in biology; I used Lotze's philosophy more than any other. It is our duty to examine here many an authority on these great themes. I have not always proclaimed the fact when something a little novel has been presented on this platform. If you do not find everything elsewhere that you find here, why, you may conclude that I have not either. But to-day, entering on a very dangerous field of audacious speculation, I shall be representing Lotze's opinions, rather than my own.

1. From the idea of matter life and soul cannot be explained.
2. From the idea of spirit all material properties may be deduced.
3. Choose the latter as the ultimate substance of all things, and we satisfy the desire for a similarity of character in all that exists.
4. Physical phenomena point to an underlying being to which they belong, but do not determine whether that being is material or immaterial.
5. Matter is a form clothing a supersensible reality, in itself similar to the soul.
6. When matter acts upon soul, or is acted upon by soul, it is not necessary to suppose that it acts as matter through the physical forces of its external sheath, but that the supersensible basis or core of matter directly acts upon and is acted upon by the other supersensible reality, the soul.

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7. The will, Lotze believes, can produce movements in matter ; not without cause, but without cause of the same kind—that is, without a pre-existing movement whose energy is passed on into a new movement.

8. Consciousness is not a passive concomitant of the material changes in the nerves, as has recently been taught in Europe and America.

9. A difference of substratum transforms heat into magnetism, or electricity into heat.

10. If a physical energy is transmuted into a spiritual energy, it is absolutely necessary to suppose the presence of a peculiar subject, the soul, which by its peculiar nature produces this difference on the character of the phenomena.

11. Lotze's view, therefore, is in complete harmony with the doctrine of the correlation and transformation of forces.

12. The birth of the soul is not the result of the natural course of things ; nor yet is it a creation out of nothing.

13. The substance of which it is made existed in the exhaustless substance of the Absolute.

14. The extended world of phenomena is not distinct from the domain of the Absolute, or the spiritual world, whence the soul comes ; but is penetrated everywhere by it.

15. "That condition of the natural course of things in which the germ of a physiological organism is developed is," says Lotze, "a condition which determines the substantial reason of the world to the production of a certain soul, *in the same way that an organic impression determines our soul to the production of a certain sensation.*"\*

Suppose that we have here (making use of the blackboard) two differently arranged sets of particles of matter. The union between one of these masses and the other occurs at this middle line. If we jar the particles on the left of that line, and the motion of the atoms crosses the line, the motion will not be the same on the right as on the left. Why not ? Because the particles are not arranged there as the particles are on the other side. Why is it important to notice that circumstance ? We can transform heat into magnetism or magnetism into heat. Both are only modes of motion, or a shiver of the ultimate

\* Lotze, *Medicinische Psychologie*. See the translation of this work into French by M. Penjon, from a text so far revised and augmented by Lotze as to make the French better than the German edition as a final expression of Lotze's views. See also articles by Mr. Bixby in the *Unitarian Review* for February and March, 1877, with summaries, a part of the language of which, under a new arrangement, has been employed in this analysis. For other similar statements see Überweg, *History of Philosophy*, Vol. II., 812-821, and Erdmann, *Grundriss der Geschichte der Philosophie*, Vol. II., ch. 847, 11-18.



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particles of matter. You have here in the left-hand figure a peculiar organization of matter, and there in the right-hand figure another organization. You find that heat passing from this form of matter is transmuted into magnetism in that form. The difference between the shiver of the ultimate particles here and the shiver into which it is transformed there is accounted for by the different organization of the two sets of particles. Heat is not magnetism, and when the former is transformed into the latter the difference must have an adequate cause. The transformation is supposed to be due to the peculiar and different nature of the magnetic substratum. We know that this different substratum exists, for we see its effects. So, too, if a physical is transformed into a spiritual energy, it is undeniably necessary to assume the presence of a peculiar subject, the soul, which produces this difference in the character of the phenomena. The latter difference is one of almost measureless breadth, and so must the difference be between the soul and matter.

Lotze does not teach that the motions of the ultimate particles in the nerves are transmuted into thought and choice and will. That would be materialism. Neither does he teach that there are two parallel sets of phenomena, with no connection between them, and that the mystery of their union is absolutely inscrutable. That would be Herbert Spencer's nescience. Lotze assumes that matter and spirit have a common origin and at the last analysis a common substratum. Matter to Lotze is visible force. In his view, it has all the ordinary qualities which we attribute to matter. It cannot move itself. Inertia is one of its inherent properties. Faraday was right when he said that inertia probably is the only true characteristic of matter. But at the bottom of all matter Lotze finds the Absolute Substance from which everything in the universe proceeds. All things finite were created. From what? From nothing? No. Is matter an effluence of the Divine Mind? In one sense, Yes. In one sense, No. God is not like matter; but matter is a product of the Omnipotent Will. The Divine Omnipresence transcends infinitely all matter and finite mind, but is immanent in both everywhere. Natural law is only the method of action of the will of Him who was and is and is to come. This is true of the laws of matter, as well as of those of mind. Therefore, His will underlies the laws of matter—inertia, chemical attraction, cohesion, magnetic affinity—as surely as it underlies the laws of the soul. He has given a substance to the soul. He has given a substance to matter. The two substances, we say, are utterly unlike. There is one thing in which they are common. They had the same origin.

If, therefore, as one of the propositions I have put before you

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declares, we are to explain how matter can have an influence on mind, and mind have an influence on matter, perhaps we had better assume that the real core of matter is a supersensible reality. What does that long word mean? Something that cannot be reached by the senses. It is above our senses. There cannot be qualities in matter unless there is something in which the qualities inhere. The soul, too, has its qualities, and these must have something in which they inhere. That something is immaterial. But what we call immaterial in the soul and what we call supersensible in matter may have at the bottom one quality. When, therefore, the soul acts upon matter, or matter upon soul, it may be that the supersensible element in the one and the immaterial element in the other are brought into contact. The likeness of the supersensible and the immaterial accounts for the influence of the one upon the other. It is not necessary to suppose that chemical affinities, regarded simply as such, are transmuted into thought. Lotze rejects, in the name of precision of thought, every form of the mechanical theory that leaves us to conclude that when the body is dissolved the soul is no more.

Must I venture an illustration to make these abstruse thoughts clear? There is a substratum in soul. There is a substratum in matter. When matter influences matter, the act is like that which occurs when two gloved hands meet and clasp. It is in one sense the gloves that clasp; and in another only the hands, the living forces beneath. But when matter and a soul to which the Divine Will has given individuality influence each other we have a gloved hand, matter, meeting an ungloved hand, the soul. You say that the glove presses on the ungloved hand. What you mean is that the hand in the glove presses the hand that is without a glove.

This is Lotze's view, which I have been accused, in a Unitarian Quarterly, I believe, of not understanding. Until to-day the progress of our discussions here has not called for a statement of it. I have not been pedantic enough to read page after page of German and translate it here; but, if you will look into Lotze's *Medical Psychology*, in either its German or French form, by Penjon, you will find the propositions which I have put before you. Most of them have been published even in the *Unitarian Review*, by a writer who assails me for not understanding Lotze.

By the way, just at this point, perhaps I had better state that a few critics assume that, as to this lectureship, it thunders all around the sky. It does thunder all around the hurt Spencerian and Darwinian sky, and a little of that sky is sometimes found behind Orthodox mountain ranges. But I shall prove to you that I intend to mislead nobody. I shall offer some evidence that no attack has

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been made that is more than a Chinese thunder of gongs, instead of the real thunder from the sky. I shall prove to you my sincerity, at least, by asking you to read all the attacks! Study them elaborately. We are here as students. Nobody will be gladder to have faults pointed out than I. Nevertheless, I must assert, in the name of candour and straightforwardness, that the attack which seems to be made the bell-wether for all others is the one that I am the most anxious to have you read. If that attack is the best that can be made, there is no great risk to be run in defending a sound philosophy here. The writer founds an accusation of pantheism upon a citation which expressly asserts the Divine Transcendancy over all natural laws. As proof that it has been asserted here that "natural law and God are one," he quotes language which explicitly affirms that "He whom we dare not name transcends all natural laws"—that is, that God and natural law are not one. I have in my possession written proof that Agassiz made the same suggestion concerning parthenogenesis as that which was made here. Bishop Butler does not seem to this writer orthodox company. He has no words of respect for Beale or Ulrici or Lotze. He underrates, very curiously, the great value in the conflict with materialism of the recent advances of knowledge in the field of microscopical research concerning living tissues. He overlooks entirely the distinction drawn here between life, vitality, and soul; and then proceeds to make injurious inferences consistent with this oversight. Not one important error of biological fact is pointed out. He cites discussions of a quarter of a century ago to justify the neglect of some of the most honoured results of German philosophy, based on new investigations of the last twenty years. I did not know, when I referred to this article the other day, in strong language, that it was attributed to an author of whom I have always spoken with studious respect. It is said that this attack was made by an "eminent naturalist." For my sake, I hope it was. For his sake, I hope it was not. From beginning to the end of his attack there is nothing inconsistent with one of the central propositions in it: "These lectures may be generally good, in spite of serious faults." The writer leaves open that way of escape. He keeps retreating lines well in sight. He has not asserted anything more than that sentence implies. Even in this way of episode, however, and by side blows with the left hand, I am not about to defend myself, for I need no defence from that attack, except that you should read it. I could put before you evidence here that every word this lectureship has indorsed concerning the downfall of Huxley's *Bathybius* as a biological celebrity is true. If any of you will study the original documents, you will be satisfied.

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Read Hæckel's attempted defence of the Bathybius, in a late number of the *American Popular Science Monthly*, in which he admits that Huxley has changed his views, and that, from being a biological celebrity, Bathybius has tumbled down into the gloomy Hades of mythology. Even the crudely Spencerian *New York Nation* does not attempt to defend Bathybius. As to another point of partisan criticism, let me say that one of the foremost literary gentlemen in New England has authorised me, in writing, to assert that he knows the person who heard Thomas Carlyle make certain famous remarks cited here as to Darwin. Too much has been said in the *Popular Science Monthly* about the inaccuracy of the information obtained by Boston upon certain points; but Boston and Ruskin happen to agree as to these words of Carlyle. If I were at liberty to mention the name of the literary gentleman who authorized me in his letter thus to use his knowledge, I should convince you at once that on this point there has been here no speaking at random.

There will be partisan attack on this lectureship from all quarters of the sky. It means almost nothing, partisan praise or blame. Strong support and strong opposition will come. But the support from partisan sources means nothing to me; the attacks from partisan sources almost nothing. But when a man who has opposed all his life propositions which are dear to me—a man like the Plummer Professor of Harvard University—comes forward again and again and indorses the general discussion here; when a man like the revered ex-president of Harvard University, who has opposed all his life propositions very dear to most of us, indorses this lectureship; when the Dean of Canterbury, and the *London Quarterly Review*, and the *Princeton Review*, and the *Bibliotheca Sacra*—I beg pardon, I am making a sad ado over nothing—come forward and support an experiment, a novelty, I think these, too, are signs of the times, and that in the sky behind the sky there is a little thunder also.

Lotze's doctrine is in perfect conformity with the modern theory of the conservation of force; and yet he never teaches that the motions of matter are transmuted into thought. Matter and spirit act upon each other through the supersensible reality which is in each. Lotze, of course, rejects what Hæckel calls monism, or the hypothesis that there is but one substance in the universe with such properties that we can explain by it both matter and spirit. He distinguishes between the soul and the vital force. He affirms that the attempt to transform mental and moral science into a physical natural science is "mere manner of speaking, signifying nothing, or else is equivalent to the pretence of understanding by the eyes, and seeing by the ears." He rejects the form of materialism defended by Professor Bain, and which

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that matter is a double-faced somewhat, having a spiritual and physical side.

The distinction between the philosophy of Lotze and that of Häckel and Bain is a subject worthy of the attention of all scholars, for the subtler forms of modern thought are crystallizing around Lotze and twenty other names which represent similar ranges of investigation, and are departing more and more from Bain and Häckel. Audiences do not often in this country give the ear you have given in Boston to this discussion; and, therefore, here in Boston this audience is calling attention to these themes for the whole country.

Häckel's monism, which is one of the many forms of materialism, sinks soul in matter. Not so the subtler procedures of Lotze, not so Ulrici, not so Schöberlein. We have an accredited—I had almost said now firmly established—scheme of thought, recognizing the laws contained in the fifteen propositions I have read to you, and asserting, in their name, the possible existence of the soul in separation from the body.

When does the soul originate? Lotze would not have you think of the immaterial world, the Unseen Holy beyond us, as separated from the visible universe. Souls, according to Lotze, do not come into the world from afar. They are not rained down out of some inaccessible region of the universe. They originate in God, who is not far from every one of us. He is omnipresent; and wherever He is there is the capability of creation.

Soul meets its organism whenever and wherever God calls that organism into existence. It is, according to Lotze, a being which, from its characteristic nature is in immediate relation with the co-ordinating centres of the nervous organism and with what goes on in them.

When God creates germinal matter, to be used as the basis of the career of an individual human life, He, out of the Omnipotent Power of the universe, brings into existence what we call the gloved hand, or bioplasm; then He locks with it an immaterial or ungloved hand, which we call the soul. The two hands come into being together. Lotze denies the theory of the pre-existence of the soul. But the ungloved hand does not depend for its existence on the gloved hand. We talk of matter as if it were a hand, and not a glove with a hand in it. So far as matter is inert, it is a glove only. This glove may be taken off. The supersensible reality at the core of it—the spirit—is God and is indestructible. That supersensible reality, the glove taken off, may lock in with the other hand, and thus the divine spirit and the soul, which the Spirit has created and upheld, the flesh dropped, the glove thrust away, exist for ever locked together.

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### LECTURE SECOND.

THE ceiling of the Sistine Chapel at Rome contains a picture, by Michael Angelo, representing the creation of a soul. He had only these words to suggest the design of his painting: "Man became a living soul." What would you have made had your task been to produce a picture with this sentence as its only suggestion? Angelo shows us Adam as a perfect body, reclining upon a mountain slope, and possessing animal life merely. The Supreme Spirit floating in ether, full of brightness, draws near him in human form. Of course, the figure representing the Divine Being must be a failure; but, as a mere human form, art says it is one of the most matchless in the world. Some cherubs' faces that accompany it are exceedingly noble. This figure represents a Creative Power. It extends its right arm, and Adam lifts up his left. His hand is lax, his whole body is flacid; but from the Divine finger to his finger there passes an electric spark of the Divine Likeness, and Adam becomes a living soul. A photograph of that supremely majestic work of Michael Angelo I keep on my study wall, and I cannot live with it out of sight. Nevertheless, to me it is not the most perfect symbol of the method of the Divine action in the creation of a human spirit. Better than that picture to suggest the attitude of modern science would be one far older—the tabernacle in the wilderness, enswathed with a cloud full of light, and having at one part of its interior a holy flame. The cloud touching every part of the tabernacle is the emblem of the Divine Omnipotence acting in all natural law. But this Presence is manifested in some parts of that tabernacle in a sense in which it is not in all parts. There is a conscience in man; there is in the human soul a capacity that does not exist in the immaterial portion of a brute creature. But the cloud enswathes the slabs, and the brass, and the curtains of the tabernacle, as well as the Holy of Holies. There is no portion of the symbol that is not bathed in the cloud; and so there is no part of natural law that is not filled by the Divine Omnipresence. In the conscience, however, and in the creation of the human spirit, the Divine Presence is manifested as it is not elsewhere. At these places a Holy of Holies exists, and in it is a holy fire. On this theme, as on so many others, the meaning of the symbols of the tabernacle is inexhaustibly significant. The cherubim stand above that holy fire and look down upon what lies beneath their

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wings, and do not understand it all. They know that spot is the Holy of Holies, and that God is there; and probably ages hence, when illumination shall have filled the world, such as to make our present science darkness, the cherubim will yet fold their wings and say: "Holy! holy! holy! We know that God is there." Mechanism is not the word that will be written on that casket a hundred years hence. It is not the word written there to-day, under the eyes of the highest scholarship.

Instead of answering in the name of any authority—German, Scotch, English, or American—the question as to the origin of the soul, I am now to endeavour to obtain a reply from the established facts of biology. What do we understand of the process of the production of many lives from one? Stuart Mill asks us to make always a broad distinction between what we positively know and what is yet in debate. Leaving out of my list of propositions everything doubtful, I am now to collect and put before you only the facts as to which scholarship is agreed concerning the origin of the soul. Facts arranged in their natural order suggest their own explanation. While we listen only to facts which speak for themselves we are on firm ground.

1. Many of the physical organisms of the lower forms of life propagate themselves by self-division.

2. In a self-divided organism there is in the two halves physical identity.

Suppose that we have here [drawing a figure on the blackboard] what Hückel calls a Moneron, one of the lowest types of life, an animal of irregular shape, a mass of protoplasm. It moves. It feeds itself. It grows. It has life. After it has grown to its natural size, it constricts itself in the middle [illustration on the blackboard], and finally falls into two portions. Self-division like this is the simplest form of self-multiplication of organisms. There appears to be concerned here just that mysterious property which a living mass of bioplasm exhibits when we see it, under the microscope, throw out a promontory, which becomes detached at last, and then, as it takes up nutriment, goes on enlarging according to the law which governs its parent.

The supposition is that the mass of bioplasm is homogeneous, or of the same qualities throughout. The promontory it projects will be physically of the same qualities with the parent mass. When that promontory breaks off, there will be in the island the qualities it had as a promontory. Therefore, between the island and the original mass there will be physical identity. So, when an organism, consisting of a homogeneous mass of bioplasm, multiplies itself by self-division, the original organism and the subdivided halves are related to each other by physical identity.

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3. In a self-divided organism physical identity is transmitted by hereditary descent.

Here begins, but here by no means, as Hæckel thinks, ends the explanation of the law that like breeds like. Two yet greater facts are equally demonstrable with the three already mentioned.

4. The co-ordinating powers governing the movements of the two halves are also identical.

5. The co-ordinating power is, therefore, transmitted in hereditary descent.

In our subdivided organism here [referring to the blackboard] each half goes on acting as the parent did. Each takes up nutriment and enlarges, and finally divides, as did its parent. These movements must have a cause. The laws of the movements are identical with the laws of the original organism. The co-ordinating power which we have proved to lie behind all the movements of organisms we know, therefore, is transmitted here. Its effects are visibly the same here as they were there. The cycle of life through which that subdivided half passes is the same as that through which the parent passed. The co-ordinating power goes over. The physical power goes over.

6. Between the parent and the germ of the child there exists, therefore, a double identity—the one physical, and the other not physical; the one material, and the other not material.

7. On the basis of this double identity stands the supreme law of hereditary descent—that every organism breeds true to its kind.

It is vastly important that we should take these earliest steps with great caution, and be sure of our ground at every point. We demonstrate by its effects that the co-ordinating power is transmitted in hereditary descent. We are sure, from all our previous arguments, that this co-ordinating power does not belong to matter. We have proved here, we think, that life in physical organisms is the power which co-ordinates the movements of germinal matter. That co-ordinating power existed as one life. Now it exists as two lives. So much is certain. You say that it has divided itself. Very well. Do not look into mysteries to-day. I do not know how one individual becomes two. The angels gaze on that casket, and do not understand what is within it. I am not pretending to illuminate mysteries. What we know beyond doubt is that in a self-divided organism one life becomes two lives. How one individual becomes two individuals I do not know. Nobody knows. We know *that* one does become two; but not *how* it does. When we examine facts, however, we can trace the action of this double identity, physical and immaterial. This undeniable circumstance explains much. Every organism breeds true



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to its kind, and it does so because a double identity exists in the parent to the child.

Self-multiplication by the division of organisms involves a production not only of two lives out of one, but of twenty, sometimes out of one. You may take the water polyp [illustrating on the blackboard] and chop it through the middle, and each part will develop into a perfect animal. Chop each of these through the middle, and each half will develop into a perfect animal, and so on, until you have produced from one individual, it is said, forty. Many biologists affirm that forty lives can be produced in that way from one in some lower organisms that are homogeneous throughout. Of course, if you take a bird from a bush, or a twig from a tree, you cannot produce a whole organism from any one part; although, by the way, a twig from a tree as a scion may develop into a growth like the parent. You must have one of the lower organisms homogeneous throughout, in order to give to each segment the power of reproducing itself. How all that occurs nobody understands. If you wish me to speculate, I will say that the co-ordinating power goes over here, and that physical identity exists here. The co-ordinating power in the homogeneous animal is found in every part, and when you divide and subdivide the organisms, the co-ordinating power draws to itself from the outer world clothing to each of the fragments, as it drew to itself clothing in the whole animal originally. There are two kinds of ghosts—tangible and intangible. Every organism is a tangible ghost. I am no spiritualist. When I take as a guide a rat-hole revelation it will be when the clouds obscure the sun at noon. In the water polyp we have a co-ordinating power, and it is attracting to itself a clothing. We sub-divide the animal, and each part draws to itself similar clothing. We do not suppose that the co-ordinating power is increased or diminished. It was all in that original organism. It was all in the germ of that animal and its forty lives have all been involved from that original co-ordinating power. That is what we see. There are the facts. But how they were involved is more than we know. It is a mystery, perhaps beyond plummet's sounding.

8. The double identity between the parent and the germ of the child is the cause of the likeness of the latter to the former.

9. It is not physical sameness which accounts for the likeness, but the sameness of the co-ordinating power.

Many germs of different animals are chemically identical. The difference, therefore, in their development must be accounted for by the different co-ordinating powers behind them. It is, therefore, safe to assert, and it appears to me greatly important to emphasize the fact, that it is not a physical sameness which accounts for likeness of

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parent to child; but the sameness of the transmitted co-ordinating power. The sameness of life is the influence which produces the likeness between parent and child, and not the sameness of the famous firm that Virchow of Berlin calls "Carbon, Oxygen, and Co."—a firm which, he thinks, has failed of late!

10. In the higher forms of self-multiplication, such as by budding and egg-cells, this law of double identity holds good.

Häckel says that all the laws of self-multiplication in the higher forms are involved substantially in the simple self-subdivision by which self-multiplication occurs in the lower forms. We have organisms that multiply by budding and by seeds, and others by egg-cells; but at the last analysis there is a physical identity between parent and child, and an immaterial identity behind that physical identity. Häckel says that laws of hereditary descent may be summed up in the physical identity of parent and child. He holds that life is only a mechanical action of molecular particles. But we here have rejected his authority on that point. We hold that life is more than mechanical action. Häckel affirms that "the life of every organic individual is nothing but a connected chain of very complicated material phenomena of motion."\* Lotze knows better than that. We know better than that. Virchow knows better than that. This doctrine of Häckel's has lately been suffering severe persecution in Germany, and I shall not pause at the end of perhaps twenty lectures against the mechanical theory to justify the definition of life as the co-ordinating power behind germinal matter.

11. Vitality, life, and soul are to be carefully distinguished from each other.

12. In the higher forms of self-multiplication there is vitality in each of the two elements which unite to form a germ.

In the oak, for instance, we have self-multiplication by stamen and pistils and their two elements, which unite to form the acorn and to fructify it. Now, in each of these two parts there is vitality. I do not suppose there is life in either of them. Vitality may belong to an individual cell, but not life. It is certain that in a complex organism you may destroy many a cell and the co-ordinating power or plan of the whole organism not change. On the surface of the cellular integument we lose cells which possess vitality; but life, the co-ordinating power, is precisely the same, although you lose cell after cell from the cellular integument and from every other part of the system. From not making this distinction between vitality and life, the greatest blunders have been committed in biological reasoning. It has been

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\* *History of Creation*, Vol. I., p. 199, Am. Ed.

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asserted again and again that this lectureship makes no distinction between vitality and life; but the vitality which belongs to the cell is like that which belongs to the grains of pollen dust. A co-ordinating of movements must occur before we have evidence of the existence of what we call the co-ordinating power.

13. After the union of the two elements, there is life—that is, a power co-ordinating the movements of germinal matter according to the laws of its type.

Does anybody doubt this? When an acorn begins to sprout, do you doubt that there is in that acorn a co-ordinating power which begins to weave the oak? I know on what ground I am treading. The instant the co-ordinating force, which ultimately produces your king of the forest, commences its work in that acorn, life is there. What is life? Co-ordinating power behind the movements of germinal matter. It begins the very moment anything is structured. You crush your germinant acorn, and you kill an oak.

14. If the two parts which are united by the pistils and stamens of the flowers of the oak are destroyed, that which is destroyed is not life, but vitality.

15. If an acorn be destroyed after it has become germinant, not merely vitality is destroyed, but life.

16. *This law holds good in all the higher organizations, not excepting man.*

I am passing here across chasms in which lie dead men's bones and dead women's, not merely in China, not merely among the seven hills of Rome, not merely among Romanists, but among Protestants, under the shadow of church spires on the Christian sward of New England. Dr. Storer is the authority for you to read; and a famous essay of his\* scattered broadcast over America by vote of the American Medical Association, I need only name to give sufficient emphasis to unspeakable matters here, visible, but not audible.

17. The authorities of the medical profession are right, therefore, in speaking of a certain nameless crime, or the destruction of prenatal life, as murder.

Do you say that in the human case there is no oak destroyed? What? You affirm that, to make any organism human, there must be in it a soul, and that until a soul exists in it the organism is merely an animal. What makes a soul? Memory, conscience are essential parts of the human spirit. When does memory start up in a human being? What is the first thing you can remember? Ruskin, there on one of the English lakes, looks under the arched roots of the

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\* *Why Not?* Lee and Shepard, 1875.

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cedars, and beholds water gleaming in the sun. There began his conscious life. He had no memory of any event before that; or, at least, none that would hold for his subsequent years. He was an animal until then, was he? It would have been no crime to have killed him before that, would it? Richter, an infant in the presence of the Fichtelgebirge, looks up one day and sees an avalanche fall. It is his first memory. Till then there was nothing in him that had the capacity to treasure up experience for his subsequent years. Then began in him the permanent activities of what we call memory; and a being is not possessed of a soul until he is possessed of a memory, you say. Kill Richter, then, any time before he attains memory, and you have committed no crime. But, in order to have a soul, a being must have a conscience. And when does a child acquire moral responsibility? Law says when it is seven years of age, In some children we see the action of conscience earlier; but is there a developed conscience before the third or fourth year? Now, if there be no soul until there is a conscience, kill any child before it comes to a sense of what is morally right or wrong, and you have killed only an animal. I dare not trust myself here to speak as the topic deserves; but I would rather you would listen to the Romish confessional, which always makes a crime of that which the highest medical authorities in the name of Dr. Storer have denounced. I had rather you would listen behind curtains to the severe doctrines of the Romish confessional than behind curtains on this topic to the support of fashionable murder in some fashionable circles of society.

18. If a babe cannot be said to be other than an animal until it has a soul, and if it has no soul until it has a memory, and if the destruction of its life is not a crime until it has a soul, then it is usually no crime to take the life of an infant under one year of age.

19. If a babe that has no conscience may be guiltlessly murdered, then, until a child arrives at an age of three or five years, the killing of it is no crime.

20. By self-division there may be produced from one life many lives.

21. The new lives here are created by being evolved.

22. They were all in the capacities of the original type of the coordinating power.

23. The power of matter is a gift from God, under limits of necessity.

24. The power of life in man is a gift under concession of freedom.

25. God is immanent in mind, as well as matter.

26. Molecular law may be the profoundest expression of the Divine Will.

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27. The continuity of Nature is only the continuity of the Divine plan and its execution.

28. A thoroughgoing recognition of the Divine Immanence and Omnipresence, both in mind and matter, is the only explanation of the origin of souls and of the laws of hereditary descent.

Our best symbol of the origin of life is, therefore, not Michael Angelo's, with the spark passing in a mechanical manner from the creative finger to the created hand ; but the cloud enveloping the tabernacle, or the Divine Immanence in both mind and matter, which does not deny for an instant the Divine Transcendence over both. The Creative Power throws out souls into the universe as a flame throws out other flames. It is not diminished. It is itself not transferred. Perfect distinctness between the original life and the life which is kindled ! No diminution of the power of the Unapproachable Flame which kindles all finite lives ! A magnet may create other magnets, and yet not diminish its own power or lose its separateness from the power it creates. The magnetism in all souls is from God, and yet different from Him. The kindling of all finite lives is God's, although the flames are distinct individualities.

## *THE DESCENT OF BAD TRAITS AND GOOD.*

AN Arabian philosopher said: "O God, be kind to the wicked! Thou' hast been sufficiently kind to the good, in making them good." We are surprised to find that an infant which has done no evil may inherit evil. A human being is presumably innocent on coming into the world; but we often bring with us most terrific predispositions, such as inflict upon us unhappiness throughout life. Bad traits descend by inheritance, but so do good traits; and if, therefore, this morning I am to draw before you a dark picture, I must put by the side of it a bright one. The left hand and the right hand in the government of the universe are contrasted, as are the antipodes of the world; but even antipodes are parts of one circle. Possibly we shall find that, after all, the right and left hand of the laws of hereditary descent are adapted to each other, may easily be clasped the one upon the other, and that behind the two hands is only one form and one heart, and that Almighty God's. The descent of bad traits may be a blessing, although one of another sort than the descent of good traits. It is evident that the two laws operate together, under the control of one Almighty purpose, that of moulding humanity into—it does not yet appear what—but into something like its Author.

I am accustomed to summarize the laws of hereditary descent under seven heads: direct heredity, reversional heredity, collateral heredity, coequal heredity, premarital heredity, prenatal heredity, and initial heredity.

1. By direct heredity is meant the usual action of the laws of descent. The child resembles its parents; and yet, as Ribot has said, we must distinguish under this head two different sets of facts. In the first place, a child may resemble both its parents equally. In the next place, it may resemble one of them peculiarly; but in that second class we must distinguish two sub-classes. The likeness may be in the same sex, or not; that is, the son may resemble the father and the daughter the mother, or the son the mother and the daughter the father.

2. Reversional heredity occurs when the child resembles its grandparent. This is called atavism in the technical language of the books, and we are very sure, from observation, that it is one of the most influential laws of hereditary descent. The grandson often resembles his grandfather and the granddaughter her grandmother. There is no possibility of explaining the traits of individuals without using this law of reversional heredity perhaps three times out of ten. Judg-

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ments differ as to the average of the number of cases to which the law must be applied; but they are numerous. It is not important to our purpose here that we should determine the number by even an approximate average.

3. Collateral heredity occurs when the child resembles an uncle or aunt, or some one of its relatives out of the direct line of descent. This often happens. It is one of the curious phenomena of inherited traits that nobody knows how to predict in advance what will happen. As to many of the subtler results of the laws of hereditary descent, we know only that they appear. We do not understand their causes. Nobody pretends to understand them. Nevertheless, our ignorance of the causes does not imply ignorance of the effects. We are certain that there is a law of reversional heredity and a law of collateral heredity, although we do not know in detail what lies behind the laws.

4. Coequal heredity is the name of that law by which, in the large average, the numbers of the two sexes are mysteriously preserved in substantial equality.

5. There is a form of heredity which may be called the premarital, and it is seen when the child of a second or third marriage resembles the husband in a previous marriage.

6. A form of heredity which may be called prenatal is observed, where good or bad, fortunate or unfortunate influences, which have powerfully affected the mother as such, are exhibited in good or bad results of the greatest importance in the life of the offspring. It is said that the mother of Napoleon read *Plutarch's Lives* and other heroic literature, and that her moods of mind were transferred to her son. This law, as to the existence of which all the ages are agreed, is prenatal heredity, and the range of it is limited to the real prenatal life of the child.

7. Lastly, we have what probably is the most important form of inheritance except the first. I call it initial heredity, because this portion of the laws of hereditary descent turns upon the temporary mood, good or bad, fortunate or unfortunate, of parents when they become such. Ribot, in his elaborate work on *Heredity*\* mentions only four of these laws. He omits the fourth, the sixth, and the seventh, and his analysis is, therefore, curiously incomplete. I am not aware that the seventh has ever been called by the name here given to it. The first, the fourth, and the last of the seven forms of heredity are undoubtedly the most powerful of the circumstances which determine the horoscope of our lives.

Never shall I forget standing in the hall of busts of the emperors at Rome—I think I must have here some notes made in the presence of

\* P. 147, Am. ed.

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the marbles—and studying the face of Agrippina, mother of Nero, and the organization of Nero himself at different ages, and finding in the predecessors of Nero just the traits which reappeared in himself. You know what a sensual thickening of the lower face, and of the space between the neck and chin, existed in Agrippina, Nero's mother, in spite of the general symmetry of her face and the fineness of fibre of her Italian temperament. She had ability, perfidy, ambition, capacity for intrigue and cruelty, also, in the service of her predominant traits. You cannot look into her face in marble even without noticing that she was one of the fools who are caught by the pleasures which Cicero has justly said are by no means the greatest—the sensual class of indulgences. Her organization was not coarse; and yet it was low. From such a mother, whom he finally caused to be murdered, this Nero inherited just the same neck, the same perfidious expression, the same tendency to cruelty, the same forehead. There is in Nero, I think, much more of the mother than of the father, for the bust of the latter looks like that of a weakling. He amounted to almost nothing, except that what little force he had was evil. Ahenobarbus, the father of Nero, was stained with crimes of every kind. He was accused of murder, adultery, and incest, and escaped execution only by the death of Tiberius. You remember that, when congratulated on the birth of his son, afterward Nero, he replied that whatever was sprung from him and Agrippina could only bring ruin to the State. We have in Nero at different ages a repetition of what must have been the mood of Agrippina at different ages. I remember a bust of Nero at eighteen or twenty years of age, exhibiting brutal coarseness, perfidy, and the puffy face of physical indulgence. A bust representing him later in life shows a withered lower face, contrasting oddly with the dewlap in the chin and the thick neck. His last busts show these same traits, together with a wrinkled forehead and scornful and lawless lips, and yet the fibre of the man's brain and face was not so bad as the form of both.

Turn to the other side of the hall, however, in Rome, and you will see Marcus Aurelius, the most virtuous, perhaps, of all the emperors. As surely as infernal traits went down upon Nero, celestial ones went down upon Marcus Aurelius. I suppose the latter was no more to be praised for what he inherited than Nero was to be blamed for what came to him exclusively through the laws of hereditary descent. I hold that Nero was sane. Some historians have gone so far as to suppose that his bad traits quenched in him moral responsibility. But he had freedom of will and was responsible for the bad use he made of his inheritance. Marcus Aurelius, on the other side, seems to have been pushed from before birth into the position of a philosopher and a



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saint of the pagan sort. He had by inheritance a predisposition to the virtues which his reign exhibited.

Now, was Providence unkind to Nero? Was Providence partial to Marcus Aurelius? To the third and fourth generations bad traits go down. To the third and fourth generations good traits go down. These are facts. What does Providence mean by them?

There are seven laws of hereditary descent. It turns out that a good initial heredity may produce virtue in the descendant by predisposition, merely from a temporarily ennobled nature, although there was in general vice in the parents, and so a bad direct heredity. The apparent injustice of Providence is mitigated by this seventh law. If you are in a lofty mood, Providence is on your side; but when a drunkard on the one hand, or when, on the other, a man generally temperate, but in a temporary debauch, places himself under the power of these laws of heredity, that seventh principle acts just as surely to produce an inheritance of evil as it does in the opposite case to produce an inheritance of good. Have you not known some idiot born in an able family? I know one, who all his life goes about congratulating his friends: "Good morning, sir!" "Good morning, sir!" Nobody, without similar experience, can measure the long reaches of the knives that must pass up and down in the soul of the father of that idiot, for he was one of the ablest men of the town in which he lived; but he was temporarily a drunkard, and God cursed him, through that law of initial heredity. Have you not known children more highly gifted than their parents, or inheriting the excellences of one or both in a higher degree than was attained by the parents, except temporarily?

Initial heredity is a law which has two edges, both belonging to the same sword, which has but one hilt and is held in but one Hand. Let us not accuse God too early.

That I may not seem to be uttering blasphemy, let me transfer the unspeakable topic of hereditary descent to a lower plane. Here is the Commonwealth of Massachusetts. What if she should make a law that every man who is habitually intemperate shall lose good judgment? We should say that she is terribly in earnest. That is a fearful thing to do. Would you vote for any such regulation? Probably not, if you have been educated liberally. Take away a man's judgment for habitual intemperance? Why, the thing he most needs, under such temptation, is sound judgment; and to crush in his good sense is to tempt him more, and perhaps to ruin him! Ask me to vote for a law that every man who is habitually intemperate shall lose good judgment! Not I. I have been better brought up. I was born in Boston. There is a Commonwealth of which we have heard,

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where the laws are not passed by count of heads and clack of tongues—a Commonwealth governed by Superior Powers, among which there is no vacancy waiting to be filled by any human election; and in that Commonwealth such is the law, and it is executed every time. What do you think that Commonwealth means? It is terribly in earnest. It is terribly partisan. It has an opinion as to the difference between intemperance and temperance. If across the vault of the sky were written that opinion in letters of fire, it could not be proclaimed more emphatically than it is by the law that every habitually intemperate man loses good judgment.

But now will you vote for a law in Massachusetts providing that every man who is habitually and persistently intemperate shall have every nerve racked by pain, shall find the very holy of holies of the physical organism invaded by hot pincers, shall be put upon the rack and tortured, as if demons had him, and shall go hence in *delirium tremens*? Very few men would vote for such a law as that. It is a terrible thing to injure a man's health. His family depends on him; children depend on him; orphans are to be regarded. We must be liberal. There cannot possibly be passed any such regulation, unless we forget the interests of wives and of these little ones, who are not responsible for coming into the world. Surely, liberalism will have no support to give to a law by which habitual intemperance incapacitates a man for the supporting of his family. There is, however, a Power yonder—which seems not to be governed by sentiment like this—which has made a law that every habitually intemperate man shall have his veins tortured, and shall have every nerve seized in red hot pincers. That government is terribly in earnest. That is what it does. It does that every time. You know that. There is not a particle of doubt on this subject. There is not a scintilla of unrest in men's minds on this whole topic. What do you suppose the government means?

But now, what if it should be enacted in Massachusetts, in addition to both these other laws, that every habitually intemperate man shall transmit a diseased constitution to his offspring, and that this injury to the health of the children shall endure to the third and fourth generation? Who would vote for such a regulation? Where is the man educated in Arnoldism; where is the man brought up on the platitudes of Spencerian Nescience; where is the person who thinks that, on the whole, whatever we do, the nature of things is on our side; where is the man that believes that it is safe to teach the people to rely on an opportunity for repentance after death, that would not exclaim with horror if a proposition were made to him to pass such a law? "Is thy servant a dog that he should do this thing?" If

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Massachusetts should adopt such a law, and execute it every time, you would be sure of two things, at least, that she is terribly partisan and that she is terribly in earnest. The Supreme Powers have enacted such a law, and executed it every time; and they have not made an apology for six thousand years.

Evidently the first thing to be said about this terrific earnestness of the Powers above is what has already been hinted—that the law of initial heredity belongs to virtue, just as much as to vice. Suppose that when these laws were passed in Massachusetts, it should also be enacted that every man who lives a virtuous life, every man who fills his soul with the Divine Spirit, every man who by self-surrender to natural laws puts their power on his side, shall be blessed above his anticipation, shall have good judgment given him, when he did not possess it before, shall have health as a kind of perpetual intoxication, shall have the power to transmit to another generation better conditions than his own. You say that you would vote for such a law; but not for its opposite. Of course, not. Man's vote is not asked for in the passage of natural laws. It is not to be supposed that because you would vote for what you call the kind regulations, you would vote for the stern ones. Not you. Everything must be callow and muscilaginous in your government. The government of the universe is not callow at all. There is an Ebal yonder, and a Gerizim also. With you, however, there must be an upper, but not an under; there must be a right hand, but not a left hand; there must be a before, but not an after. But up yonder different ideas prevail. The truth is that your regulations, the moment they were put in force, would become a curse, deep, multiplex, immeasurable.

Who does not see that the terrific seriousness of the laws of hereditary descent, instead of being an injustice, is a proclamation to every man to institute a reform? Who does not see that the sternness of what is done on the left hand pushes humanity into the softness of the right hand? Who does not see that God makes all his chastisements like the mother's tossings of her infant upon her knees? This is for the sake of health. He makes them to be like obstacles laid down in the path of a child learning to walk. A little clambering is an education.

If, after all their allurements of promise and their threat of doom, there is at last no hope of reform, what do the laws of hereditary descent do? They put an end to the earthly existence of the transgressor. When I meditate on the severity of the laws of hereditary descent, I am relieved by remembering that the earthly career of vice is short. Before the eyes of exact observation in this world the thoroughly vicious family is at last burned up. So much we know beyond a peradventure as to the fires of the universe. One of the greatest curses

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pronounced alike by the Scriptures and natural law upon evil is that it shall have no name long in the earth.

But you say that sometimes evil dispositions last a great while. Sometimes people who are half vicious and half virtuous, if such expressions may be allowed, puzzle the world in families that live century after century. Yes. In spite of the severity of the laws of hereditary descent, God gives every half-breed a chance. He suffers long with a man who has taken out of the ancestral spaces burdens and comes weighted into life. He gives him an opportunity, and puts by his side these laws of heredity—reversional, collateral, premarital, prenatal, and initial. Direct heredity does not choke him. Five other laws of heredity stand by him, if natural law is obeyed. Every human being has all the chances represented by the seven laws of hereditary descent.

But when the Supreme Power sees that no chance is improved then it allows the laws of heredity to shut down upon the transgressors, and they are removed from the earth.

What good does that riddance or removal do? It has been justly said that the ages are kept from being insane by the cradles and by death. If we could not get rid of disordered human organizations, what would happen to the centuries? Oliver Wendell Holmes remarks that most people think that any difficulty of a physical sort can be cured if a physician is called early enough. "Yes," he replies; "but early enough would commonly be two hundred years in advance." Concerning the terrific earnestness of Nature, it is certain that she means well, even in her severities, and that we must treat her as we would a kind commonwealth.

There is one service that the Supreme Powers are willing to do for us, and which I have not supposed human power to endeavour to effect in a parallel case. The Supreme Powers have a law, of the existence of which we have seen the proof here, that whenever a man submits himself utterly to that divine thing in him we call conscience, a new set of affections shall be given him, by a rearrangement of his nature. A light will stream in through dome windows which before were curtailed. There will come into the depths of his life a quickening and transforming power utterly unobtainable except by total self-surrender to conscience.

Under that law, take the worst case of heredity, take a man who is born like Nero, and let him surrender to conscience, and then those terrific steeds which have dashed off the track with him become courses of fire on the line where God would have him drive. It is not a bad thing for a man to have a tempest in the lower half of his face, if only he has a hurricane in the upper half.

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### LECTURE SECOND.

IN the days of chivalry a marriage was usually contracted with a sacred regard of the demands of natural law, and not merely of those of social or personal caprice. There were often required from both parties thoroughgoing certificates, not only of noble descent, but of courage, loyalty, piety, and all the chivalric virtues it was desired to transmit. Infidelity sometimes thinks that it has exclusive possession of the topic of the hereditary descent of good traits and bad. If you put your ear upon the ground and listen—as it is my duty to do, as a student of the signs of the times and an outlook committee here—to the subterranean noises of discussion, you will find not a few of them coming from pickaxes, undermining faith in the natural laws which proclaim that the family is a divine institution. Approaching the delirious traitors who handle these ill-omened weapons, you will find that there burns above their foreheads a miner's light composed chiefly of blue fire. And yet there is often one streak of white flame in it. These sappers of the foundations of society profess a desire to have mankind improved by obedience to natural law. Although their method of improving the race would usually land it in moral chaos, one of their central purposes is not a bad one—namely, to secure enlarged obedience to natural law, as the method of raising the average intellectual and moral merit of the human family. Christianity has had that motive for a long while. She has understood, ever since the Decalogue was proclaimed, that the good and bad traits of parents descend to the third and fourth generations. She was the first to reverence woman adequately. Even in what you call the half-benighted Jewish system of life woman received honour such as was shown to her nowhere else on the planet. The Marys, the Ruths, the Sarahs—they whose appellations coming down across all the turmoil of the years, are honoured yet as among the foremost female names of all time—were growths of what you call the meagre, stunted tree of Judaism, the root out of which has sprung Christianity. Sweet was the root; majestic is the tree! My feeling is that, were you to cut down the tree and were you to deracinate that root, there is little philosophy on the globe that could be depended upon to perpetuate the family.

Suppose that we have here a marking-machine or a vertical plank [illustrating on the blackboard], against which a million men, one after the other, stand, while the height of each is dotted upon it. Let

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the measurement be repeated with other millions of the same race, living under the same conditions with the first million. It will be found that there is a substantially unchanged average height for any million year after year. The dots representing the height of the different individuals will range over quite a space. There will be a few very short men and a few very tall ones. Let a line representing the average height of a million be drawn through the cloud of dots. On both sides of that average line the dots will diminish in number as they recede from the average. Notice where the dots representing the least height stands, and where the dots representing the greatest height stands. Divide the distance from the lowest to the highest point into equal spaces. We find but a very few dots in the upper space and a very few in the lower. But, if you will tell me where this average lies, and how many points there are in that upper square, I can calculate, according to mathematical law, what the number of points would be in the other squares. Experience and calculation correspond with marvellous closeness inside the range of such spaces. This is the famous law of deviation from an average, of which such extensive use has been made by Quetelet, the Astronomer Royal of Belgium, the highest authority on vital and social statistics.\*

The vagrant dots in these equal spaces above and below the line of average follow a law so perfectly that, from knowing one part of the apparently unsymmetrical arrangement, you can draw the map of the rest. If these dots were bullet-marks, they would follow the same law of deviation from an average. Stand yonder with your regiment, and fire your bullets against the plank. Aim them all against this central line. Some will strike below it, some above it, and some will strike the line itself; but, when you have determined your average, and the number of bullet-marks in any square, the law of deviation from an average will enable you to estimate with great precision the number of bullet-marks in any other of the squares.

Now, what has this to do with hereditary descent? A million men of the same race, brought up here to this measuring machine, are proved to have heights governed by a fixed law of deviations from an average. It is to be presumed, therefore, that their weight, their muscular strength, the size of their chests and brains, and every one of their physical traits are governed by a law of averages. But, if a great variety of physical traits may be shown to depend on the law of average in this way, the mental traits may be also. If you can prove that this law of averages governs the majority of the physical traits of the race, it also touches their mental traits. Scientific observers

\* See Quetelet. *Letters on Probabilities*, translated by Downes, London, 1849.

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are agreed in assuming that there is a law of averages applying to mental and moral, as well as to the physical capacities, in the individuals of the race. At the top of the mental scale we have genius; at the bottom, stupidity. Determine the position of the average line between these two extremes, divide the space between top and bottom equally, and then ascertain the number of cases represented by any one space, high or low, and you may determine by the law of averages the number in every other space.\*

How can the average ability of the race be raised by the application of the laws of hereditary descent?

In putting this question before you, I am perfectly aware that I am venturing into chaos; or, at least, into regions where it is difficult to find firm ground on which to put down the foot. I am not speaking here at random; but cautiously selecting the few sound conclusions which science has reached, and combining them in such a manner that we may see, if our eyes are open, the trend of investigation on this most blazing of all social themes. It is the duty of this lectureship not to skip difficulties. And, delivering now the one hundredth Boston Monday lecture, you shall not see me dodge. Milton, you know, sends out Satan across Chaos; and he is to build a road under himself as he proceeds to the Garden of Eden. I am on an expedition of similar difficulty, but of diametrically opposite purpose and direction. Courage, my friends! The road is being built the other way—from Eden out across Chaos into the caverns of the lost spirits, over the outer works of infamy and degradation, and through the gates of Death. Let us, standing upon the mighty parapets of loyalty to natural truth—that is, to God's will, as revealed in the family—build a bridge out from it into the world of lost spirits, over the Chaos, and meet Satan half way, throttling him backward beyond the forms of Sin and Death.

These are the ten propositions on which I dare put foot, after a prolonged study of this theme:—

1. The best results for the improvement of the race will be attained by obedience not to a few, nor to most; but to all of the seven laws of Heredity—direct, reversional, collateral, coequal, premarital, prenatal, and initial.†

Here are the seven laws of hereditary descent, and you and I cannot vote them up or down. We may obey them or disobey them; and, if the race is to be improved by the application of these laws, the first thing to feel sure about is that we must obey, not one of them, but all of them. The trouble with most reforms of the wild sort is that they

\* See Galton's use of Quetelet's law, *Hereditary Genius*, Am. ed., pp. 26-32.

† For definitions of these terms see *Lectures on Marriages and Hereditary Descent*.

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are merely fragmentary attempts at loyalty to Nature. They put into the foreground some one of these seven principles, and not all of them, Nature revenges herself always for any partial loyalty with which we serve her.

2. The law of coequal heredity is the loud proclamation of monogamy as of natural (that is, of Divine) ordainment.

3. The law of initial heredity has a similar meaning.

We are on holy ground. We may well pause here to allow our thoughts time to express much which ought not to be uttered audibly. There is a mysterious law by which the numbers of the two portions of the human family are preserved in substantial equality. Emigration may change the proportion of the sexes. It is by no means denied by me that in some districts of the world the numbers of one sex predominate over those of the other. But, on the large average, in the natural arrangement of things, there is an astonishing equality preserved between these numbers by a fixed natural law. That significant arrangement I call coequal heredity. Now, if you admit that marriage is a natural state, it is natural for every man; and it follows, therefore, mathematically—and on this topic there is no louder proclamation in the universe—that the law of coequal heredity is the Divine ordainment of monogamy. Your thoughts are following this line of remark further than my words have carried you; and I am willing that they should follow it on and on, until, in the councils which preceded the formation of the world, you find the Divine fiat regulating Paradise. By natural law Eden consists of Adam and Eve, and not of Adam and two Eves or twenty. There has been no departure from this law of Paradise since the career of man opened. The fiat as to coequal heredity, exhibited in the earliest historic documents, certainly has not been changed for six thousand years. God has been expressing His mind as to social arrangements these six thousand years. From the beginning He has uttered but one voice. He always maintained the law of coequal heredity, and by it has maintained the law of monogamy as the natural—that is, the Divine ideal. I defy any man who reveres the scientific method, or who loves to think boldly, north, south, east, and west, to look into the natural arrangements on this topic and find support for any other party than God's own as a guide for future civilization. I should be almost willing, were men sure to obey wholly the dictates of what we call Nature, to leave the justification of monogamy exclusively to those who correctly understand coequal and initial heredity.

Did Shakespeare know of what he was talking when he spoke of the green-eyed monster, called Jealousy? Have the poets in all ages been blind when they have asserted that there are passions through which the words *mine* and *thine* obtain at times terrific emphasis inside the range of social and family life? If the law of coequal heredity proclaims monogamy, so does that of initial heredity. If



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there is to be a supreme affection, there is, of course, to be a guarding of it; and, if the poets, if the philosophers, if all who have studied the human heart are not wrong in assigning to jealousy a force sufficient to burst social mountains, making them crack open like so much baked clay, at times in revulsion after revulsion—if that power has always been one of the high explosives in human history, you may put it, too, on the side of monogamy, for there it is where God intended that its force should be expended.

4. The average ability of the race is not equal to its present tasks.

Galton says that men in modern times are in danger of being drudged into imbecility. There is hardly any class of the advanced intellectual labourers of the world than does not need a higher grade of ability to meet its tasks. You, sir (turning to Dr. Storrs), were telling us last evening how to solve the great problem of the government of cities, by evangelization. You were showing us how cities reach all the globe; and, as some of us listened, we were wishing that we oftener had leadership like yours into these wildernesses of iniquity, greed, and pelf, where men are trampled down every day, merely because they are not strong enough to stand for the right. We want higher ability in every grade of intellectual activity; nor is the physical capacity of the race equal to the demands made upon it by modern civilization.

5. Whatever light science can throw upon the methods of improving the average ability of the race, consistent with the natural institution of monogamy, is, therefore, needed and should be diffused.

We are not so far advanced, I hope, as to despise the social wisdom of the age of chivalry.

6. The intermarriage of highly gifted relatives tends to diminish, rather than to increase, the ability of the race.

Niebuhr says that aristocracies, when obliged to recruit their numbers among themselves, fall into decay, and often into insanity, dementia, and imbecility. Who does not know that this truth might be illustrated by vast ranges of historical knowledge, were there time here for the presentation of details? The Lagidæ and Seleucidæ for ten hundred years intermarried, and through nine hundred years were in a process of mysterious decay. Who does not know that it was the feeling of many of our Revolutionary fathers that half the thrones of Europe were filled by persons more or less erratic, on account of descending from relatives? It was one of the propositions Jefferson often talked about in private that the thrones of Europe were filled with imbeciles, the result of consanguineous marriages. The rule of the Church of England to-day on this topic is more strict than has been that of some decayed royal houses.

7. The marriage of highly gifted persons of different lines of descent is a method of improving the upper, but only the upper—that is, the most intellectual and virtuous—portion of the human family.

Face to face with the question, What is God's sifting machine in His own application of the laws of hereditary descent to man's improvement? I must whisper that, for one, I think there is an indication in Nature as to what parties should enter into marriage. It is a

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solemn hour. This house is still. Do not say that I am uttering blasphemy if I affirm that God speaks in a pure and permanent first love. Is there a human being of the average order to whom Providence does not send that indication of duty? When it is sent, it is to be respected as a divine sign. We are not left in ignorance on this most critical of all points. I hold that in the laws of the supreme affections a pillar of fire is set up before men for their guidance; and, if the noble prefer the noble, it is well that they should. That is for the benefit of the race. If the degraded prefer the degraded, how do we know but that it is well they should? Extinction is before them the sooner. We have learned to face terrific facts here; and, among other facts, we have faced the circumstance that God puts an end to an incorrigibly wicked family in this world. These subtle laws by which supreme affections are determined are the sifting machine of the Divine Powers. And, subtle as the laws are—discussed foolishly in parlour, in pulpit, in press, and on the platform; degraded age after age by vice, prated about only too superficially by poetry—they, nevertheless, have retained their sanctity. All around the globe the word that hushes humanity quickest, next after the name of God, is the name of first love. Such is the fact of human experience. And when I stand here to assert that the divine indications in this particular are not given out at random, that where a supreme affection is granted there a divine indication of duty is to be discerned, you will find the better part of the philosophy of the globe on my side, you will find the better part of poetry on my side. Of what have the best singers loved to tell us oftenest, if it be not of the first supreme affection? Where is there anything so hallowed inside the whole range of secular discussion as this unspeakable theme? God grant that the spirit of our German fathers, who found, according to Tacitus, something celestial in woman, who revered her responses, and buried the adulterer alive in the mud and whipped the adulteress through the streets, may be the permanent principle of our Anglo-Saxon civilization; for, if it be not, I foresee only the fate of Rome for the sins of Rome, only the fate of Sardanapalus for the sins of Sardanapalus, only the fate of every nation that has violated these subtle laws, only the fate that comes inexorably to a luxurious age, when it loses its purity and falls into such callousness that it cannot discern God's touch in these supreme natural indications of His will.

8. Even were this method successful, there would remain in the lower portion of the race a majority of beings of inferior minds, of which heredity would perpetuate the deficiencies. (Ribot, *Heredity*, Am. ed., pp. 289-300.)

Men who talk superficially on this theme suppose that it is a simple one, and that, if we could make arrangements to suit ourselves, the average ability of the race might be lifted easily to twice its present height. You might lift a portion of the ability and moral merit of the race, were you to observe natural law in the form in which I have now outlined it; but even then you would lift but a portion. There would be, I suppose, more than half the numerical size of the race below the average needed by our tasks. What shall be done with

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that lower portion of humanity? Is the problem concerning its improvement by hereditary descent yet insoluble?

9. Many writers hold that a physically and morally superior race, united with an inferior one lowers itself, without raising the other, so that all such alliances are a loss to civilization.

The question is whether such marriages are justified by the subtle indications of which I have been speaking with bated breath. If they are not, beware how you cross the current of God's purposes in natural law. You say the current is not very swift here. But, if it is a current God urges on, no matter how slowly it moves, it carries with it the infinities and the eternities, and you must not try to stem the force of what is deeper than all thought can sound, and more powerful than imagination can measure. Slight indications, you say? The superior has naturally a supreme affection for the superior, and not for the inferior. In that law there has been explosive power, too. My feeling is that the instinct of the poets is right, and that the severest philosophical thought on this topic is right. Each proclaims precisely what many writers do, in the name of exact historical investigation—that usually there is a physical and a moral deterioration in the case supposed. The inferior race is not lifted as much as the higher is lowered, when the difference in the level of the two is great originally.

Of course, I remember what intermarrying has done for nations standing nearly on a level with each other. There has hardly been produced in history a great nation, or a great man, not composed of very diverse elements; but the intermingling has usually been of strong bloods. To that there is no objection. In favour of that there is much in these subtle currents.

10. The application of the laws of hereditary descent to human improvement is, therefore, beset with great natural difficulties, and will continue to be so until, by other means than the law of heredity, the intellectual and especially the moral averages of merit in the human family shall be greatly heightened.

Dana, in his geology raises the question whether a being better than man is to succeed the human race on this planet.\* Superior to any form of life now on the globe, what will be that future creature, as much better than man as he is better than the brutes, which he follows in the line of development? We know, as Agassiz has taught us, that the fish and the serpent have horizontal spinal columns; but that the highest animal organisms below our own have spinal columns in oblique position, and that at last man has attained the erect attitude, and so has fulfilled the possibilities of his anatomical structure. But there are those who say that, just as in past geological ages there were premonitions of better things to come, so in this last geological age, in the filling up of man's spiritual capacities, in the descent upon him of a power not his own, there is a prediction, perfectly parallel to many a prophecy made in the geological ages that have gone by, of a world in which a superior being will appear, and of which the law will be righteousness.

\* *The Geological Story Briefly Told*, pp. 253-255.

## INFIDEL ATTACK ON THE FAMILY.

### PRELUDE.—CATHOLICISM AND PROTESTANTISM.

If the Pope is infallible, he is irreformable, except by death and a successor. Although no link in a chain can be bent easily, a succession of links may easily change its direction. Let us remember that, in spite of the infallibility of the Papacy, the power behind the Pope is a succession of links, and that every election of an incumbent of the great chair at St. Peter's is an opportunity for changing the direction of the chain. History exhibits curious changes in the policy of the Papacy, and proves that its mediæval armour is far from being wholly impervious to the heavier weapons of the signs of the times, however true it may be that the clouds of the lighter arrows of modern discussion drop off its breastplate like so much futile rain. To-day the Papal policy is undoubtedly far higher than it was in the time of Leo X. Let us thank God that no Julius II., and no Leo X., who thought more of art than the "fables concerning Christ," could now be elected to the chair in the Vatican. This result has been effected by the pressure of modern discussion upon Romanism. The continuance of that pressure will not be without victorious effects in time to come. We cannot exterminate the Roman Catholic Church, or change its name very easily. For one, I think it may be in existence twenty centuries hence, or when Macaulay's New Zealander, in the midst of a vast solitude, shall take his position on the remnant of some arch of London Bridge to sketch the ruins of St. Paul's. But, if Romanism is not likely to change its name, can it not change its nature? The proverb says that "Catholicity is the strength of Romanism, but that Romanism is the weakness of Catholicity." What if Protestantism should set herself vehemently to the task of fostering Catholicity inside of Romanism, by taking the position of the Old Catholics and opposing as vigorously as in Luther's day not Romanists, but Romanism? Will not that be the strategic line of effort for changing an infallible Pope?

It is to be remembered that 200,000,000, or very nearly that number, profess the Romish faith. The system of ecclesiastical order perfected by the management of Italians is by some regarded as a greater triumph of the genius of the people of the peninsula, south of the Alps, than was the Roman Empire. Certain it is that Church machinery has never had in history such colossal power as that which is represented by the 122 vicars, the 693 bishops, the 183 archbishops, all obedient in every part of the world to the slightest beckoning of the Pope's finger on the Tiber. This machinery is all in action. The passing away of a Pope changes the Romish hierarchy very little.

Of necessity, however, two changes will probably be recognised by the new Pope. The temporal power is not likely to be insisted on with such un-

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timely emphasis in the future as it has been in the past. Political interference with strong nations is likely to become unfashionable, even with Vatican Romanism. In view of these changes, which are so certain to occur that I need not stop to show that they are probable events in the future, it is pertinent to ask what are we not doing that we could do for the Romiah nations of the globe? Where are they? What is their condition? Glance from St. Peter's around the planet, and compare Catholic countries with Protestant.

Put into contrast, first, Italy and Prussia. North Germany, as compared with Italy, has many physical disadvantages—a poor soil, an inclement climate. We know what the German universities are, as compared with the Italian; what German literature is, as compared with the Italian in the last hundred years. I do not forget King Bomba. I do not forget how Italy has been sliced and peeled and seared. But, everything considered, has Italy suffered more since Luther's time than Germany did under the Thirty Years' War? Have cannon-wheels and sabres injured her more since the period of the Reformation than they have injured Germany? Has she been the battle-field of all the European wars, as Germany has been? Where are the demoralizing influences in Italy to account for her inferiority to Prussia to-day as a moral, intellectual, and political force on the globe? I was assured in Rome, by a most scholarly and painstaking Italian statistician, that when the Papal States, in which the Pope had his own way, fell into the hands of Victor Emanuel a less proportion of the adult inhabitants could read and write than in the darkest provinces of Spain.

Pius IX. was himself a reformer in his youth. It is supposed that he never quite gave up his zeal for Italian unity. Of course, so many men who were not religious defended that enterprise which Garibaldi led, and which finally the brave Victor Emanuel carried to success, that a Pope pledged to conservatism could not very well appear to be at its front. It is not surprising that Pius IX., soon after his succession to the Papal chair, was thrown into the background, instead of being placed in the foreground of political reforms. But it is said, in spite of the fulminations he now and then officially issued against Victor Emanuel, that he retained always his friendship for that king. Certain it is that Italy had in it combustible material both for moral and political reforms; but did Romanism kindle it?

Compare the Catholic and Protestant cantons of Switzerland. Dickens says you would know the difference between them even if you walked across the borders between them in the night.

Contrast, next, Spain with England and Portugal with Scotland. Of course, great allowances must be made for the political disadvantages of Spain and Portugal. Edmund Burke called Spain a stranded whale on the coast of Europe. Why has it not had recuperative force enough to flounder back into the sea? How is it that Protestant nations, not greatly favoured by climate or position, strike into the vanguard of progress, while the most favoured semi-tropical Catholic countries drop behind, fall into ignorance, pauperism, general decay, and exhibit so little recuperative force?

Do you say that climate is against the semi-tropical territories of the Latin races? Very well; cross the ocean. There is Canada. It has two

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ends, an eastern and a western ; and the climate does not differ vastly in the two sections, but the state of society does. It has been my fortune to be mobbed on the St. Lawrence for temperately asserting, in defence of a Protestant colporteur, who was my companion, that I did not believe that a priest could raise the dead. I have travelled I suppose an hundred miles on foot along the St. Lawrence, and not been able to find a single cottage of an *habitant*—this was twenty years ago—in which I could have obtained an amanuensis to write a letter to my friends, if I had been too sick to write one myself, or to find a Bible in the vernacular tongue. One is surprised in Canada to this moment, in the eastern and Romish portion of the Dominion, to find the rural population very largely in a state of prolonged childhood, just such as characterizes the agricultural populations of Italy and South Germany and Austria. In Western Canada we have the brain of the Dominion, and a heart and enterprise that are reaching out their arms to clasp Manitoba and the fat valley of the Saskatchewan and the Pacific. Western Canada is a Protestant region, and its recuperative force, its progressive valour, as contrasted with Eastern Canada, result very largely from its different church life. I know how beautiful the shores of a portion of the eastern provinces have been made by the marvellous local sorcery cast upon them in a famous New England poem. An Evangeline, indeed, may be born in a Catholic province ; but, if you come closely into contact with the social life of the villages of the type of Grand Pré, you will find that little by little they lose their hold upon your fancy. Little by little, as stories, probably not well authenticated in nine cases out of ten, but with something behind them in one case out of ten, remind you of accusations which caused a convent to be burned once yonder, in sight of Bunker Hill, you begin to doubt whether it is best, after all, to bring up young men and maidens in an undisturbed Romish style. They ought to learn the Scriptures, and not be taken in hand and moulded as so much wax by men who at best are fallible, even if they have an infallible leader on the Tiber.

The truth is that to-day, in Eastern Canada, the progress of the newspaper press in popular influence, the advance of education, are preparing a large revolt against priestly power. There is hardly a more promising field on this continent for Protestant effort than Lower Canada, in its present gradual emergence from a state of subserviency to Romanism, and its contagious quickening in the Protestant spirit of education and self-rule. We have many faults which, I hope, the Canadian Romanists will not copy. Your Catholic peasant of Eastern Canada is reverent ; he is docile under religious instruction ; he is cheerful under hard tasks ; he is not without vague religious inspirations, which seem almost to have come down to him by hereditary descent. But he is at the same time choked by ignorance and by subserviency to superstition in many cases. It was my fortune once to ride from Pointe-au-Trembles to Montreal, when a driver said to me : “ Do you notice how the fields are left desolate on account of the grasshopper scourge ? ” “ Yes. ” “ Do you know that last summer we implored the aid of our priests to rid us of this plague ? ” “ No. ” “ Well, you should know what these small buildings placed at

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intervals at the side of the way were made for. The priests offered prayer in them when the grasshopper plague was here last summer. They came into these structures by the roadside, and burned incense and offered prayers." The man was perfectly in earnest, and thoroughly honest. "And, sir, the grasshoppers began to leap over each other in billows. They had eaten up the very fences previous to the swinging of the censers; but they jumped over and over and over each other and away from the censers, until there was not a grasshopper left on our fields." "Why have you not swung the censers this season?" "It is for our sins. The priests will not interfere." I was then within sixty miles of the United States!

Mexico is another contrast. Put it face to face with almost any State of the Union. There is a Colorado College now in process of construction. It hopes to stand as a lighthouse for the range of the Rocky Mountains and the great valley between the Sierras and Colorado. Conversing with its president the other day, and conversing lately with a bishop from Mexico, I found a concert of action between Protestants in that southern nation and in the western portion of our own for spreading abroad the light through the desolate valley of the Colorado, and southward into the sandy stretches of Northern Mexico, and then upward to those highlands of Central Mexico, which are ultimately to contain a great population. A railway is being built southward from Denver, and will reach before many years the City of the Montezumas. It will awaken the Spanish villages on its route. How sublime is the duty of lighting college-beacons to blaze afar from the Rocky Mountains and the Mexican heights! "We have," says President Tenney, "mediæval Spanish Catholicism voting in Colorado. If the Spirit of the Lord descends with tongues of fire on a Christian college in the New West, it is likely that one of the tongues will be Spanish."\*

What do we see in the City of Mexico at this moment? Scores of ecclesiastical buildings left vacant, and to be obtained for a song by Protestants. The foremost Catholic preacher of Mexico lately took to his residence outside the city a pamphlet written by a Protestant bishop, with whom I have had the honour to converse. The Romish priest sat down in his summer-house to read this attack on his faith. He was an honest man. He had built his opinions on tradition, more than on the Scriptures. When he found an eloquent plea for Protestantism put before him, there in the solitude, by a man who lately had been threatened with assassination and had written this pamphlet as his last word to the world, the priest was smitten with the conviction that he had been teaching errors. He became a Protestant. "The Pope will be converted next!" said the astonished Roman town. The priest entered the largest Protestant church in the city, filled it with a vast audience, and, with power and dignity rarely matched, began to speak to all Mexico through the press for Protestantism.

Who does not see that in the present posture of the Latin and the Saxon nations, so far as they are touched by Romanism, we have a loud call for the inspiring of all Protestant endeavour in the Latin nations? Where

\* Tenney, E. P., president of Colorado College, *The New West*, pp. 39, 40. Boston. 1878.

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are the men to go to Mexico to occupy to the full the opportunity opening there? Where are the men that can fill up the openings in Lower Canada? Where are the men to teach a pure Gospel in Portugal and in Spain? Where are the men that can carry the light of Protestantism to the very edges of the windows of the Vatican, open the Scriptures under the dome of St. Peter's, and show Rome what she never has seen—a Protestant church of great power doing its duty thoroughly?

Go to the secretaries who are watching the Latin races in their relations to Romanism. Ascertain the secret whisper of experts on this theme. It is that Romanism at this moment is discouraged, on account of the number of defections from Romanism in the Latin races. In Spain, in Portugal, in Italy, in Mexico, there are great stretches of popular, to say nothing of educated defection. The word of the hour with the Jesuit party is: "Let us occupy the Saxon zone. Let us remember what support we have had from perverts in the last fifty years. A Newman, a Bronson, a Cardinal Manning, a Tractarian party in Oxford and elsewhere, have been our most effective apologists. Let us remember that the future Church of the globe is in the hands of Saxon nations. As we are failing to hold our own zone of the Latin centres, let us make an attack not only upon the religious faith, but upon the political quiet of Germany, of Scotland, of England, and of the United States. We Jesuits have had a bad name since Pascal wrote his Provincial letters; but we once knew how to manage courts, and shall we not learn how to manage political parties? Once we led, because we were better teachers than other men. Shall we not lead now, because we are better politicians? Who does not know that the world is more and more governed by popular suffrage? Who does not know that two hundred million people are behind us, and have hitherto followed our political, as well as religious bidding? Who does not know that, if a politician sees in our hands the power to mass the Romish vote, he is ours, unless he is more honest than most politicians are?" This soliloquy of the Jesuit power is heard oftener on the Tiber than we think. It seems to have been overheard by Bismarck and Gladstone, but not by America. It is the explanation of the Pope's remark that America is the hope of Romanism. Its success is expected here, through the political worth of the Romish vote in the quarrels of American parties.

There is no way of intimidating politicians of the unscrupulous sort except by massing votes; and there is no way to mass votes except by agitation. We must, therefore, occasionally, difficult as this topic is, speak very frankly as to the divided allegiance of Romanists. The creed of Pope Pius IV. is put for subscription before every priest, and every bishop. Every convert to Romanism must signify his assent to it. One of its sections reads: "I do give allegiance to the Bishop of Rome." And the sense is: "I do give political as well as religious allegiance."

Let us remember, however, that a great body of the Romish Church, in republican countries, is educated by general customs into distrust of priestly rule. In the city of New Haven, the question of the Bible in the schools has lately come to the front; and perhaps the most significant trait of the agitation there is that many cultured Romanists and the leading members



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of the faculty of Yale College stand together against a few erratic lawyers, a few sceptical politicians, and nondescript oyster dealers in favour of retaining certain religious exercises in the schools. If the New Haven controversy repeats itself largely throughout New England, it is not unlikely that the cultured Roman element will often be found joined with our foremost Protestant scholars in favour of a certain amount of religious training, or, at least, of stated moral instruction, in our schools, and of the use of the Bible as the supreme text-book in morals.

Let us stand by the Roman laity when they do not stand by their oath of allegiance to the bishop on the Tiber. Let us take Bismarck and Gladstone for our leaders in regard to all domestic remedies against Catholic usurpation and disloyalty. Let us have it understood from the first that there are some ecclesiastical political manoeuvres which cannot be carried through in America, nor even begun, without a protest that will amount to an explosion.

### THE LECTURE.

AFTER the Greek reformer, Phocion, who resembles our Washington, had drunk the hemlock, the political party which had put him to death refused him burial in Attic soil. No Athenian was permitted to kindle the funeral pyre on which he was to be laid; none who belonged to Attica dared to assist at his funeral. The ages remember Phocion. They ought not to forget his wife. Eleusis lies not a dozen miles to the west from Athens, and many of you have seen the white, sacred road which leads through the pass of Daphne from the Acropolis to that city. In the concealment of evening the wife of Phocion, with her handmaids and with a man whose name Plutarch has preserved for us as Canopion, went through the groves in which Plato had taught his scholars, ascended the pass of Daphne in the midnight, came down on the other side, found the border-line between Attica and Megara, took Phocion's remains over the border, obtained fire from beyond the frontier of Megara to light the funeral-pile, and when the obsequies were completed, erected there an empty tomb and performed the customary libations. Then the wife gathered up the bones of Phocion in her lap, carried them back by night to her own house in Athens, and buried them, says Plutarch, under the hearth-stone, and uttered over them this prayer: "Blessed hearth, to your custody I commit the remains of a good and brave man, and I beseech you protect and restore them to the sepulchre of his fathers when the Athenians return to their right minds."\* That was in the year 317 before Christ. The memory of this scene has been authentically preserved for us more than 2,000 years. Has paganism

• *Plutarch's Lives*, "Phocion," at the end.

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any ideals as to the family? Has human nature any crystalline waters bursting out from those arid rocks which lie beyond the range of the falling showers of Christianity? Certain it is that, if we go out boldly upon the desolate pagan waste and study the waters that burst out, not from the swamps that lie on the surface, not from any muddy region where the mere sediment of discussion settles, and where the amphibious croaking troops of slimy leprosy have their home, but go out until we find the waters that burst from the lowest, innermost depths of the pagan native granite, the quality of that sweet crystalline water and of the water that drops in showers from the Christian heavens will be found to be the same.

Xenophon tells us of Cyrus, and we remember him; but the centuries ought not to forget Panthea, who was once a captive of this king. She had opportunity to desert her husband for any life she pleased to choose, even were it that of a queen in the Court of Cyrus. Xenophon, an old Greek, who had heard nothing of Christianity, sits down to write a romance, stating what man ought to be. He tells the story of this Panthea to illustrate his ideal of family life. The woman was the wife of Abradatus, and she had married him with a supreme affection. When she became the captive of Cyrus, the king asked her where her home was. "On the bosom of my husband," was in substance her answer. "Do you wish to return home, in spite of the possibilities before you here?" "Send me swiftly." When she had been restored by Cyrus to Abradatus, she was desirous of showing her gratitude, and so induced her husband to enter the army of Cyrus and defend that king in battle. As her husband was about leaving her, she brought him what she had secretly prepared, a set of ornaments for his armour. She had a helmet also and breastplate and greaves, and put upon him gloves which had been filled with iron links by her own hands. She said: "If ever there was a woman that regarded her husband more than her own soul, I am that woman." This is Xenophon's language.\* Here is a spring bursting out of the depths of pagan soil. Notice its quality. If you see it flashing here and are dazzled by it, look into the original documents, and you will be dazzled yet more. She put upon her husband the armour, and said: "Although I care more for you than for my soul, I certainly would rather choose to be put under ground jointly with you, while you approve yourself a brave man, than to live dishonoured with you in dishonour. So much do I think you and myself worthy of the noblest things." Then the door was shut and she kissed the chariot-seat; and as it moved away she followed after it unperceived until Abradatus, looking back, said: "Take courage, Panthea. Farewell;

\* *Cyropædia*, Book VI, chapter 4.

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and now return." After the battle the news came of the death of Abradatus. She had his corpse brought to the river Pactolus. She caused it to be prepared for burial, she sat down beside it, she covered her face, she put her face upon her knees. Cyrus came, Xenophon says, and, looking upon the scene, wept; and then took hold of the right hand of Abradatus, as it lay there, a part of the remains, and the hand came off the arm. "Why need you disturb him?" said the woman, "the rest of the body is in the same condition." And she took the hand from Cyrus and kissed it, and put it back upon the wrist, and covered the face of her husband and her own. When Cyrus began to renew his offers, and assured her that she should not want honour, and asked where she wished to be conveyed, she said: "Be assured, sir, that I will not conceal from you to whom it is that I desire to go."† She begged then to be left alone, even by her servants. One maid remained with her. I cannot justify Panthea in everything. She had been brought up to the stern opinions which sanctioned suicide. What she did was to tell her maid to cover her in the same mantle with her husband. Then she smote herself, put her head upon his breast, and fell asleep.

Great Nature is in that! You wish me to teach what science proclaims concerning family life! I must ask you to go back to the deepest springs of human experience. These women, Phocion's wife and the wife of Abradatus, are sisters to us all, helpers to every age. They are crystalline water bursting up from the innermost rifts of human nature and society, and one in its purity with that rain which falls on all the hills and is the real source, after all, of every one of these crystalline springs.

Well, but you say, Lord Byron has taught us that somewhere a Christian daughter nursed her father in prison, and that no such family virtues were to be found in heathendom. Will you go with me to that museum at Naples where Pompeian relics that cannot be seen by both sexes together are exhibited in one quarter of the collection. Go with me to Pompeii, which seems to have been justly cursed of God, and in the ashes there I will show you the place where men found what now is on the wall of the museum at Naples for the eyes of every nation to look upon—a picture of a grey-haired man in a prison, with a light streaming through the barred windows. When was this picture made? Before Pompeii was destroyed. Where was this picture revered? In that soft Italian watering-place, one of the worst spots, even in Italy, in that age. In the ruins uncovered lately on the Palatine Hill we find none of the infamous Pompeian affairs. The watering-places appear corrupt in that time, as they do now. Even Rome has not been

\* *Cyropædia*, Book vii., chapter 3

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able to unearth anything equally infamous with some things found at Pompeii. But out of Pompeii, from the very heart of that festering portion of heathendom, this picture has been taken of a father in his age, and in imprisonment, and obtaining his nourishment from his daughter's breast. You say that story Byron has told us. I say that story heathendom has told us, and that there again we have great Nature, a sister and helper of us all; and that on this theme any man who wishes to know what is natural, what is scientific, must take not the amphibian pools, but these crystalline springs for his answer.

Stand there, Pompeiian daughter! Stand here, Panthea! Stand here, Phocion's wife! And come up hither and confront them, Strauss, Schöpenhauer, Voltaire, Rousseau, and any leprous free-lovers that undermine American society! Come up here! Come up here! For this discussion is not in a corner. New England listens to what this audience says, although not to what your poor lecturer may utter. Come up here and face not the Bible, but this pagan libation. I pour it out here, from goblet after goblet. I might have made the examples stretch out in a long line. Do you stand here, underminers of the family life, and gaze into the eyes of these women, while we discuss your theories? In the mood brought to you by these examples are you ready to listen without prejudice to these theories? We must put aside all prejudice! Yes, just so soon as the fundamentals of the nature of things do. We must put aside all partisanship, and discuss things here in a scientific manner, without any heat, without the least rhetoric, without any expressiveness in style. We must be cool, balanced, and give every side a fair hearing! Yes, we will be cool if the heart of the nature of things is cool on family life. We will have no opinion if the very structure of human nature has no opinion on this theme. As we speak of home, and love, and of family life, and its sanctities and sanctions, we will use tame phrases and avoid everything expressive, if Almighty God, in the supreme instincts of the soul, tells us that we must. Otherwise, not.

David Hume has said that "it is contrary to the interest of civil society that men should have *entire* liberty" in infamous matters: "but, as this interest is weaker than in the case of the female sex, the moral obligation arising from it must be proportionately weaker."\* The first man I wish to confront Phocion's wife and Panthea's eyes is whoever is foremost in opposing the principles these examples illustrate. Come forward here, whoever by theory or practice has assisted in undermining family life. You must look into the nature of things, and by that I mean the eyes of this Pompeiian

\* *Treatise on Human Nature*, Book III, part II, section xii.

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daughter, and of all who resemble her. I mean the eyes of Phocion's wife and of all who resemble her. I affirm that, if Strauss's ideas of marriage and divorce had had free course in five centuries previous to the appearance of these characters on the globe, they never would have appeared; that these springs would have been choked, and that any refreshment we have for our thirst as we quaff these pure waters would have been denied to us and the centuries. Panthea looks into Rousseau's eyes; Phocion's wife looks into Strauss's eyes; this Pompeian daughter looks into Swinburne's eyes, and you look into their eyes, following those of these women; and, in the name of science, all leprosy quails. Long experience gives it no following. Long experience meets it with a prolonged hiss and curse!

I open Schopenhauer—an angular erratic and misanthrope, you say, and yet he is temporarily one of the most popular of the non-academic philosophers of Germany—and I read that “marriage is the doubling of our duties, and the halving of our rights.” A waning class of materialists, whom Germany execrates under the name of the Fleshly School of Philosophy, defend polygamy. Schopenhauer is better known in Germany than here; and, if I may whisper the whole truth, it is that there is authority for saying that he deserted his mother and his sisters, lived in considerable comfort himself, allowed them to pass through life usually in want, and that his references to marriage have behind them a life which would be a sufficient reply to his theory, if only the life could be blazoned out before the world, as the theory has been. Ask shrewd men who know the facts, and you will find the last statement true of the majority of our social deformers. I open Strauss, and I find him saying in so many words (here is his book) that the New Testament has “ascetic” notions concerning marriage; that the Sermon on the Mount, especially, is to be criticised for lack of knowledge of human nature; that we must consent to lax opinions and laws as to divorce; and that, on the whole, the scientific method has nothing to show in favour of the Biblical ideas concerning marriage.\* Who is Strauss? He is the leading infidel writer of the last fifty years in Germany, although outgrown now. That book of his I brought from the Rhine, when arrows were falling on it thick and fast, not from conservative ranks, but from materialistic and rationalistic. Upon the appearance of this work, *The Old and New Faith*, Strauss's former supporters said, “We cannot indorse many of these propositions, although mixed with what we call sound philosophy. We cannot defend this last book.” And yet Strauss, in this volume, tries to make a complete cathedral out of his system, and to bring it into architectural symmetry. One of the

\* *Der Alte und der Neue Glaube*, Leipzig, 1872, pp. 552—261.

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central arches in it stands on this proposition, that we must discard, as unscientific, such ideas concerning marriage as the Bible supports.

Let Strauss continue to look into the eyes of Panthea.

There are two styles of attack on family life; one that of bold infidelity, and the other that of false religion. Must I mention Swedenborg as an example of the latter form of assault? I know on what ground I am venturing. Distinguish always Swendenborg from Swedenborgianism. You will not understand me to accuse Swedenborgianism of some things which must be charged upon Swedenborg. I have reverence for that religious body which is called Swedenborgian. It by no means indorses everything in Swedenborg's writings. He did not write the articles of its creed. Although no one can call Swedenborg an infidel, he is the representative of the attack of false religion upon Christian ideas concerning the family life. This style of teaching twaddles and twaddles; talks religiosity, instead of religion; drops into sentimentality; and, finally, out of softness and effeminateness and false philosophy, justifying both, comes to see God's Word itself on the side of license, and looking through the coloured glass of its own erratic constitution, believes the universe to be of the colours of the windows through which it gazes. What does Swedenborg say? I suppose that, if he were on the globe to-day, he would cancel most of the infamous teaching that can be cited from him now; but here is his favourable biographer, White,\* and he is obliged to write page after page of declamation against Swedenborg's brutal neglect of one class of women. There are, indeed, in portions of Swedenborg's writings lofty thoughts concerning marriage. Some of the subtlest propositions ever put before the world on this topic he has advocated; but it is not to be concealed that one portion of the system of thought which he represents, and for which no one should make the denomination called by his name responsible, since its scholars repudiate him, as this biographer does, justifies things which would give Sodom gladness. I cannot refer to them in detail.

The detestable Oneida Community is an example of false religion more loathsome than even Mormonism or Mohammedanism. But bring up Islam, bring up Mormonism, bring up Oneida and Wallingford, bring up every scheme that has undertaken to show that natural law is not harmonious with the Scriptural ideas concerning marriage and the family life, and let them all gaze here into the eyes of these pagan women and of all who have resembled them.

I ask now these different gazers to listen. And what do they hear? The curse of womanhood. They hear the curse of manhood too.

Swedenborg, *His Life and Writings*, London, 1867, vol. ii., pp. 418, 419.

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They hear the curse of experience. The curse of old Rome is audible; for, as our Woolsey says, she rose by the sanctity of family life and fell when the sanctity was undermined.\* But tell these women what has happened since their time. Let them know how Cicero, one of the best of the Romans, put away his wife Terentia, for no offence, and married Publilia that he might pay his debts, and lived with her but a year. How would the flaming indignation of Panthea, and Phocion's wife, and this Pompeian daughter rise to a white heat when it had only a red heat before, could you tell them what has happened since their time and could you whisper to these women that we have had loftier ideals taught the ages. After we have had eighteen hundred years experience of what pure families can do, after we have been taught, not only at the mouth of science, but at that of another authority, how to manage the family, what would not their indignation be!

If you could bring before them a tithe of the degradation that has come from the divergence of the ages from their natural ideals, and of the blessing that has come from adherence to these ideals, would you not find Panthea looking into Strauss's eyes, into Swedenborg's, into the eyes of Schöpenhauer, and Swinburne, and the rest, with overawing curse? But what if the free-lovers of our modern day were to come up here and gaze into the eyes of these three women, and all whom they represent? What if a certain Victoria on this side the sea, who is at the bottom of her sex, as the Victoria on the other side is at the top, could meet the eyes of her own sex at its best, and thus ascertain what is natural?

Let these three pagan female souls gaze into the eyes of the souls of men who are neither masculine nor feminine, but so corrupt in theory or practice that nothing can make either sweet, not even I fear a woman's curse.

This condemnation comes from the depths of the human soul. Its lightnings cannot be averted in the name of the scientific method. Look down the ages, Panthea and Phocion's wife, and thou, Pompeian daughter, into the eyes of all Swinburnes and Rousseaus. Mrs. Browning's words are those of science:

"A curse from the depths of womanhood  
Is very bitter and salt and good."

\* Ex-Pres. Woolsey, *Divorce*, chapter I.

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### A SECOND LECTURE.

PLINY the younger had two favourite villas—one in sight of the Mediterranean and another at the edge of the Apennines. He was a pagan; but it was his fortune to write to the Emperor Trajan a famous letter, describing the habits of the Early Christians. He wrote another letter, which ought to be famous, and the subject of it is his wife.

"She loves me, the surest pledge of her virtue, and adds to this a wonderful disposition to learning, which she has acquired from her affection to me. She reads my writings, studies them, and even gets them by heart. You would smile to see the concern she is in when I have a cause to plead, and the joy she shows when it is over. She finds means to have the first news brought her of the success I meet with in court. If I recite anything in public, she cannot refrain from placing herself privately in some corner to hear. Sometimes she accompanies my verses with the lute, without any master except love—the best of instructors. From these instances I take the most certain omens of our perpetual and increasing happiness, since her affection is not founded on my youth or person, which must gradually decay; but she is in love with the immortal part of me." \*

Thus reads a letter which we find in the rubbish, produced as old Rome began to crumble and as her walls fell, the ghastly secrets dropping down in the *débris*, which has not been all shovelled away yet from the foundations, either of her evil or of her good. There the letter sparkles like a gem; but it is pagan in every angle and every flash of light.

Go with me now into the most pagan portion of our modern history—the period represented by the horrors of the French Revolution—and rake over the *débris* produced by the fall of the Bastille. Old secrets came to view when that prison of tyranny was sacked. Long-buried despair found voice. Read this portion of an old letter, and contrast it with Pliny's: "If, for my consolation, Monseigneur would grant me," says one of the prisoners, "for the sake of God and the Most Blessed Trinity, that I could have news of my dear wife, were it only her name on a card, to show that she is alive, it were the greatest consolation I could receive, and I should for ever bless the greatness

\* Pliny the Younger. "Letter concerning his Wife, Calpurnia, to her Aunt."



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of Monseigneur." "Poor prisoner," says Carlyle—stern Scotchman, tender as any drop of dew and yet bold as any lion—"poor prisoner, who namest thyself Quéret Deméry and has no other history, she is *dead*—that dear wife of thine—and thou art dead! 'Tis fifty years since thy breaking heart put this question, to be heard now first, and long heard in the hearts of men." \*

I am to ask you to assemble to-day in Pliny's villa, and I wish you to bring with you this French prisoner, and also Hampden, from the death-field yonder at Chalgrove Bridge, where he met Rupert. You know Hampden was a close associate of Cromwell, and that, attacking the enemy's ranks, he received two balls, which entered the shoulder and were deflected into his body. His head drooped, and his hands sank on the neck of his horse. He rode feebly off the field; and tradition, Macaulay says, represents him as looking up, putting his hand upon his forehead, and gazing long upon the manor-house of his father-in-law, from which in his youth he had taken away his wife, Elizabeth, and he tried to go there to die.† Stern Puritan, no doubt, a wilted nature, dessicated by a false creed, you say; but Hampden's figure there, striving in death to ride toward the home from which he carried off his bride, is dignified as John Milton's, dignified as Cromwell's, and as little dessicated as either. Bring Hampden, bring the poor French prisoner, and bring one other person, to Pliny's villa. Cornelia, wife of Titus Gracchus, the mother of the renowned Roman Gracchi, lived in a house which was once assailed by two serpents. The augur said that, if the male serpent was allowed to escape and the other killed, Cornelia would die before her husband; but that if the female was allowed to escape and the male killed, the husband would die first. Titus Gracchus, than whom there has never been a more affectionate husband, although a pagan, told the augurs at once to put fortune on the side of his wife. He trusted the augurs, and their prophecy did happen to come true. He died before his wife, and left her with twelve children, among them the celebrated Gracchi. She rejected every offer of marriage, because she said that her marriage with Titus Gracchus continued. She was offered the hand of Ptolemy, King of Egypt; but says Valerius Maximus, old pagan: "The buried ashes of her husband seemed to lie so cold at her heart that the splendour of a diadem and all the pomp of a rich kingdom were not able to warm it so as to make it capable of receiving the impression of a new love."

\* Carlyle, *The French Revolution*, Vol. I. Book V chap. vii.

† Macaulay's *Essays*: "Lord Nugent's Memorials of Hampden."

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Bring Hampden, bring the French prisoner, bring Cornelia, bring the Pompeian daughter, of whom we heard lately, bring Panthea, bring Phocion's wife. Sit down here in Pliny's villa in sight of the Mediterranean, or sit down in that other residence of his, gazing on the Apennines, and watch his face and theirs, while I read two sets of propositions. I will summarize first in Pliny's presence, and in that of Phocion's wife and Panthea and Cornelia, what I suppose to be the dictate of natural law concerning the details of marriage. I know what I venture; but I am assembling this pagan tribunal in order that we may have an unprejudiced hearing. It is supposed that those who in modern times have received a Christian education cannot decide on this topic without prejudice. Therefore, I have gathered here a jury before which, in contrasted propositions, I am willing to put scientific thought, and unscientific, concerning marriage.

1. Pagan ideals of marriage make a supreme affection its only natural basis.

Cornelia bows her head, so does Panthea, so does Phocion's wife. Are there any free-lovers that dare peep into the door of Pliny's villa, after having heard his letter? Do they open a crevice or some window, and peer in leeringly, to find where the secrets are here that justify their contempt of human nature and their unwillingness to believe that there are sound hearts on the planet? If they look through this lattice, if they gaze through that crevice of a door yonder, if behind them any of the old Roman patrons of the Saturnalia stand, let both the ancient and modern pagans look into the face of this jury while I plead my cause. I do not wish to speak in a corner. Pagan ideals led this Panthea, this Cornelia, this Pliny, this daughter of Pompeii, to make a supreme affection the basis of marriage, and they were acting from almighty instinct; they were uttering the voice of untutored human nature; they certainly spoke without Christian prejudice.

2. A supreme affection can exist only between two.

Cornelia thinks that this holds good even after the death of one of the two. I am not asking her to make a rule of that proposition. There may be a second supreme affection, and perhaps a third; but I am not one of those who revere a second as a first, nor a third as a second. There were Roman poets who held up to contempt certain ladies who counted their years by the number of their divorces. If you wish to bring to Pliny's countenance, or to that of Phocion's wife, or to that of Cornelia, a look of supreme scorn and loathing, recite to them the deeds of those black spirits of the corrupt Neronian Roman days. We see the faces of these women yonder through the

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lattice and crevice and the doors; and side by side with them, those of the Brisbanes and the Swinburnes, our modern pagans. I know where I am speaking, and over what thin ice I pass; but it is not the custom of anyone who reveres science, to avoid difficulties. I have now thrown away the use of the whole right wing of the army, which I might ask for as my support. I believe in the Christian ideals. They, by-and-by, will be brought before us here for Pliny's consideration. They are, to my mind, as the noon compared with a rush-light when put into contrast with these, the best outcome of pagan ideals. But I throw away the right wing, use only the left wing of the army, come out here upon the field to combat these lies and this blasphemy; and, with only the left-hand wing, it is as easy to defeat the modern pagans as it was for Pliny to defeat the ancient, for he had only the left-hand wing.

3. In the very nature of the case, therefore, since a supreme affection is the only natural basis of marriage, the law of monogamy is scientifically justified.

It has already been shown here that the law of co-equal heredity justifies monogamy. Long before great Nature awakens in any animal moral consciousness, it begins to weed out polygamy, even from the brute race; and when at last your king of the forest appears, the lion is a monogamist. We find that as the animals rise in the scale there are more and more hints in the direction of the social arrangements which afterward show themselves to be natural in the human case; and that thus, from the earliest development of life up to its highest, Nature—by which we mean always God's will expressed in His works—prepares a place for the human home and for supreme affection between two. Even Swedenborg, whom it was my sad duty to criticise on a few points, says there is such a thing on the globe as a supreme, heavenly, conjugal affection between two. This is a fact of history, of human experience, absolutely indisputable. Now, since this style of affection can exist only between two, the law of monogamy is scientifically justified. Swedenborg's best biographer is William White; and yet let me assure any who think that I have not read enough on the topic that this biographer says that, if Swedenborg's idea on some other subjects were carried into execution, there is hardly a marriage on the globe that might not be broken up by infamy. He says, moreover, that Swedenborg treated with absolute heartlessness one class of women—any one of whom might be your sister.

4. It follows, also, that until a supreme affection exists, a marriage cannot take place naturally.

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Pliny assents to this, for this is the rule he followed. So do Hampden, and the French prisoner, and the Pompeiian daughter.

5. The fact of the existence of a supreme affection between two is to be ascertained by adequate tests.

6. When only those who have an adequately tested supreme affection for each other are married, no fundamentally unhappy marriages will occur.

7. Every marriage without a supreme affection is against natural and ought to be against social law.

8. When marriages are natural, according to this definition, the best possible means for the preservation of the best of the race are brought into action.

9. When marriages are natural, according to this definition, children's rights are likely to be adequately protected.

10. When marriage is natural, according to this definition, the family obtains in marriage the scientific justification.

11. When marriages and families are natural, in this sense, all infidel attacks on the family become futile and blasphemous from the point of view of the scientific method.

We look through the lattice-work, and find that we have interested listeners among the social quacks and pagans of ancient and modern times. I do not make broad charges; but I undertake to say this, that I have not met, thus far in life, any advocate of the blasphemous doctrines in the social range of philosophy who has not been more or less a practiser of infamous theories. Unhappy, unnatural marriages make people declaim against natural marriages. But how do unhappy marriages occur? By violation of natural law, proclaimed in all the deepest instincts—rough, haphazard, audacious violation of the most sacred instincts of man and woman! The inherent penalty of an unnatural marriage is fitly characterized as the hottest human Gehenna on this planet; and men roasted there, women grilled on that gridiron, are indeed likely to clamour about their troubles. And yet they violated great Nature at first; came into a red-hot cage, where they might have known its bars were blazing iron, had they put hands or eyes on the grating at the first. We have instincts that warn us out of such cages! If men, shutting their eyes; if women, tearing out the instincts of the deepest soul, will plunge into cages of that sort, why, the fault is with the people that plunge in, and not with the cages. I thank God that marriages without supreme affection are cages of red-hot iron. Wendell Phillips said yesterday, in this city, that all the blackness of the picture of evil in great cities pleased him, for the perils of democracy are its safety. So I may

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say that the sufferings of unnatural marriages are God's proclamation of their unnaturalness. Since the world began, have not the people writhed in the red-hot cages of marriages without affection to teach the race the wisdom of the burned child who dreads the fire? If our eavesdroppers want sympathy, they had better ask me for it, rather than Pliny. They had better ask me, because I have been brought up in an age of luxury, when advanced thought is in the air, and when more than one State of the American Union relaxes the divorce laws to a point resembling that style of legislation which Augustus Cæsar tried to prevent. Pliny here has made pleas against just such divorce laws as certain American commonwealths have had foisted upon their statute-books in moments of carelessness.

I do not believe the deliberate sentiment of America justifies lax divorce laws; but, in various ways, this topic not having had the agitation it deserves, we have allowed the deformed to get a hearing, and their conspiracies to obtain power, until we are disgraced in certain commonwealths by a laxness of divorce legislation, of which our Woolsey is obliged to devote a volume, to expose the errors and the dangers; and he holds up old Rome at its best to shame us. Edmund Burke once was obliged to oppose in Parliament an unfortunate marriage law. He closed a passage of marvellous eloquence by these words: "Why do I speak of parental feeling? The children are parties to be considered in this legislation. The mover of this bill has no child." Charles James Fox, in the same debate, rushed forward, with his contagious fire of manner and of thought and emotion, to the Speaker's desk, and took up the bill. The original draft was not so bad, but amendments had been thrust into it which altered it in a manner to make the whole detestable. Fox lifted up the bill before the gaze of Parliament. The amendments were written in red ink; the original in black. Shaking the parchment there, Fox recited Shakespeare's words:

"Look! in this place ran Cassius' dagger through;  
See what a rent the envious Casca made:  
Through this the well-beloved Brutus stabb'd;  
And, as he pluck'd the cursed steel away,  
Mark how the blood of Cæsar followed it."

In the same way, I would shake before Boston certain Christian regulations originally characterizing our legislation on divorce, and then, pointing out the red amendments which have been thrust into the Connecticut and the Indiana parchments, I shall be justified by you and by history in saying, "Through this the well-beloved modern pagan stabbed. Mark how the blood has followed the accursed steel."

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Pliny assents when I say that, unless marriages are natural, according to this definition, children's rights are likely to be but poorly protected. But we now hear a serpentine whisper from under this crevice and under this lattice: "Let children be taken care of by the State." I am afraid of my jury when I look into Cornelia's face. "The State!" Pliny says: "There would be no State if there were no family!" While we recall Burke's words, there is another whisper: "Let marriage be dissoluble at will." Burke says again, coming here in the air: "This speaker has no children." "Or," says Cornelia, "if she has, her heart is that of the ostrich, that leaves her eggs in the sand, and knows nothing of the loftiest impulse of nature, aside from marital affection—maternal love."

An unnatural, hideous whisper, coming up, it would seem, from the volcanic rifts, or somewhere from the Pompeiian ashes, out of which infamies are dug up to-day, addresses Pliny, and Phocion's wife, and Panthea, and Cornelia, mother of the Gracchi: "Let us have a community. Let us have complex marriage." "What is your name?" "Noyes." "Where were you educated?" "At Andover Theological Seminary." What a fall is there!

"Him the Almighty Power  
Hurled headlong flaming from the ethereal sky  
With hideous ruin and combustion, down  
\* \* \* \* \*  
Nine times the space that measures day and night,  
To mortal man. He, with his horrid crew,  
Lay vanquished, rolling in the fiery gulf;  
\* \* \* \* \* but his doom  
Reserved him to more wrath; for now the thought  
Both of lost happiness and lasting pain  
Torments him. 'Round he throws his baleful eyes,  
Mixed with obdurate pride and steadfast hate."  
Milton's *Paradise Lost*, Book II. 41-58.

The ghostly propositions of socialism receive only hisses from our pagan jury; for when we question this interlocutor, we find him saying that maternal love must be uprooted. "Our system is to give no mother the care of her children. Christianity has made all things common." We call hither Neander. There is a passage in the New Testament which affirms that at a certain period the Early Church made all things common. But Neander says, it is perfectly evident from the context that this contains no declaration of communism of any sort; that the subsequent institutions of the apostles are all in the line of sound thought and the ideals of all time; and that every attempt to twist out of that part of the Bible authority for socialism, is not only idiocy, but blasphemy. But this man does not hear Neander. Your poor interpreter yonder in the crevice thinks Neander

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was prejudiced. He was Christian. And Pliny will walk forward, and Cornelia, Phocion's wife, and this Pompeiian daughter, Hampden, and the French prisoner. All of them will rise, and come with Pliny forward, and look into this man's face. He is not there when they reach the place! I hold in my hand a report made lately by the Synod of Central New York, and drawn by a professor of Hamilton College, summing up facts which I cannot recite here, and running a red crooked thunderbolt through that infamy of Oneida; and I hope that soon what scholarship and piety have already done for this loathsome scandal, will be done by legislation.

Previous to the lecture, Mr. Cook read the following statement and request:—

"The undersigned are of opinion that many important errors of fact in criticisms on the Monday Lectureship are misleading the public. Will Mr. Cook have the kindness to point out the more important of them?"

This, Mr. Cook said, was signed by doctors of divinity. One of the signatures was that of a theological professor. On account of the great respectability of this request, he would venture to take a few minutes, after one o'clock, to reply to errors of fact which are misleading the public. After the Doxology had been sung, at the close of the lecture, Mr. Cook spoke as follows:—

In view of the "many important errors of fact" which, as the learned gentlemen who have made me submit to an interpellation assert, "are misleading the public in criticisms on the Monday Lectureship," I am reminded of the saying of a diplomatic sage, "If you wish to injure a man, you should say what is probable, as well as what is true."

1. It is most blunderingly proclaimed that Mr. Cook is a pantheist.\*
2. It is asserted with equal accuracy that Mr. Cook is a materialist.

In the form in which these charges are made, they flatly contradict and refute each other.

3. It is blunderingly proclaimed that Mr. Cook affirms that rationalism is on the decline in Germany. What he said is, that it is on the decline in the German Universities among "those whose special study is theology †"—a very different proposition. Over and over the language used here speaks of "specialists in religious science," or "the decline of rationalism among theological experts," or the greatest

\* In reply to the charge of pantheism, see the distinction between the Divine Immanence and the Divine Transcendence, discussed in *Biology*, pp. 378 380.

† *Bibliotheca Sacra*, October, 1875, p. 769.

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authorities in exegetical research.\* But a young writer, who, it seems, has been for a short time professor in one of our smallest New England colleges, overlooks utterly this wide and reiterated distinction, and summarizes Mr. Cook's position by the phrase, "Rationalism is on the decline in Germany."† This proposition, for which Mr. Cook is no more responsible than for the assertion that the man in the moon is an Hegelian, the haughty critic goes on to combat elaborately by painstaking history and statistics. The real proposition which this lectureship defends, and which has great importance, because of the power of specialists to lead all scholarly thought in Germany, the critic never attacks once. Nor does he attack one of the seven acknowledged facts Mr. Cook published in an article in the *Bibliotheca Sacra* (October, 1875), in support of this proposition, and which never have been questioned by criticism through the two years since that article was given to the public on both sides of the Atlantic. Besides, the circumstance that the relative number of theological students has diminished in Germany is brought forward, as if it were new to Mr. Cook. The latter, as you are all aware, has himself fully discussed this state of facts, and explained it in the eightieth Monday lecture—the last in the book entitled *Orthodoxy* (pp. 338-341). On the basis of this inexcusable misconception of Mr. Cook's meaning, the critic endeavours, through page after page, to raise the presumption that the Monday Lectureship is incautious in its statements. It is amazing to find such utterly and baldly careless or unfair criticism in the *New Englander*, and proceeding from a professor. I do not know what Yale College has against me, except that I left it and went to Harvard. I was not turned out of Yale, and intend not to deserve to be.

4. The Monday Lectureship speaks neither to nor for ministers. This has been asserted again and again, until the proposition must be wearisome. Over and over, it has been proclaimed here that this Lectureship is only an outlook committee, making reports which must be tested and taken for what they are worth. Your lecturer has no relatives in this audience. He hires nobody to come here. He never asked a favour of newspapers, and never will, although he has been treated royally by them all. But this critic says, that "it is understood that Mr. Cook is personally responsible for this published demand of attention, on the ground of established pre-eminence in the world of scholarship. Mr. Cook, through the extravagance of his claims,

\* *Transcendentalism* p. 29, and *Orthodoxy*, pp. 338-340,  
*New Englander*, March, p. 245.



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forces a strictness of criticism which he would otherwise have avoided."\*

All this is strangely inaccurate. It is one of the felicities of discussion in this Lectureship that it is utterly free from the bondage of being, or of wishing to be, representative or official. Mr. Cook has asked no one to be responsible for what is uttered here. Except by wholly voluntary expressions, no one is thus responsible.

The lecturer on this platform ran some little risk, and runs it yet. He refused to take any parish; and it was his opinion that possibly there might be interest enough in certain great themes, on the relations between religion and science, to pay a man a small income—not enough to provide for a family, but enough to take care of a single person, living pretty near the sky. That was the plan of life on which he came to this city. He asked nobody's financial support. At the present moment he lectures in this Temple at a loss of two hundred dollars every time he speaks. So says his lecture agent. Excuse me for speaking on this point; but when I am accused, as I am again and again in the sceptical sheets, of standing here as a mercenary, then I beg leave to point to past voluntary risks and present voluntary losses. Of course, I know that a base-line in Boston is worth something to a lecturer in the United States: but when a man has given a hundred lectures consecutively in this city, on difficult topics, and printed fifty-five of them, he is tested about as adequately as most lecturers are before they feel under their feet a sufficient groundwork for their effort.

5. This critic asserts that the intuitions are not everything, and that Mr. Cook falls into confusion of thought by bringing forward instinct, experience, and syllogism as co-ordinate tests of truth. The critic informs Mr. Cook that syllogism stands on self-evident truth—an amazing proposition which I never heard before! It was my fortune to spend the larger part of my leisure for two years in Andover Seminary, where I spent four years in reading on logic exclusively; and this proposition, that syllogism rests on the intuitions, I had seen before I fell upon it in the *New Englander*. But when I make instinct and experiment co-ordinate with the intuitions, I mean to put a check upon the hazy theorizing of transcendentalism, falsely so called. All *a priori* reasoning, all argument from self-evident truth, must be tested by experience. All I mean, as this audience well knows, is, that we must take these four tests and find an agreement between them before we can feel that the earth is firm under

\* *New Englander*, March, p. 237.

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our feet. It is wholly false to assert that all the four tests have not been used here. The definition of these different tests was distorted in the review; and, of course, it is easy, from a distorted definition, to draw ludicrous inferences.

6. It is asserted that Mr. Cook adopts Dr. Samuel Clarke's famous argument for the proof of the Divine existence. He does not adopt it, has never said that he does, and has referred to it only as an illustration.

7. It is said that Mr. Cook has falsely quoted Plato. The interpretation that this platform has put upon Plato is precisely that of Jowett; and I am willing that the original Greek should be placed under the microscope if you wish to combat Jowett. For one, I had rather agree with Jowett than with my critic.

8. I am also accused of misrepresenting Leibnitz. On the point where I cited him, it would not make any difference if I had misquoted him; but I happen on that point to be thoroughly in accord with Julius Müller, and I had rather agree with that foremost theologian of the German Universities than with any professor in any small New England college. I suppose you have heard of Dickens's description of the steamboat 'Agam,' he saw on the Connecticut. He said it was half-pony power, and eighteen feet short and nine feet narrow, being neither long nor wide. I am not referring to the college, for which I have reverence and affection; but to the philosophy represented by this critic.

9. But it is asserted that Mr. Cook has misrepresented John Stuart Mill; because it has been implied here, as Dr. McCosh has taught over and over, that Mill implicitly admits the existence of self-evident truth, guaranteed to us by something above experience. A newspaper, which I respect for some things, but not for its scholarship or orthodoxy, assailed me week after week, and called on me to point out where Mill makes any such assertion as that any of our beliefs may be "primordial." Finally, in the ninety-sixth Monday lecture, I made elaborate citations here—it was in the lecture beginning with the St. Lawrence, the ice breaking up in the spring; and since then I have heard nothing on that point, although the charge had previously run through several newspapers.

10. As to the authorship of an extract from Carlyle's remarks on Darwin, a virulent attack has been made on this Lectureship, and is completely answered. A distinguished literary gentleman writes to me: "For myself I can assure you that I have the most unreserved confidence in the lady who wrote the letter. I know, as well as we can know anything we do not see and hear ourselves, that Mr. Carlyle

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said what you have quoted, in a conversation. I know this lady is intimate with the De Morgans, whom I also know, and who live a door or two from Carlyle, and are intimate with him. I will give you any statement you like to substantiate your quotation." A well-known American, a public man, was with this lady when the conversation occurred, and assisted in making a record of it; and he in the strongest terms indorses the language as authentic. The extract was first published in America. It was copied into a Scottish newspaper, as a letter from Carlyle, and thence into the London *Times*. The Spencer and Lecky party in London circles obtained from Carlyle a denial that he wrote such a letter; but not that such a conversation occurred. Ruskin has cited the words, and expressed the opinion that they will be long remembered. Mr. Cook has been bitterly assailed because his taste coincided with Ruskin's, as to the propriety of diffusing this public information.

11. When I call at Osgood's publishing house, and meet the gentleman there whose duty it is to cut out book notices from all quarters of the land, for the firm, who has the whole field in view, sometimes I ask him how the battle goes. He is a most competent assistant of the renowned firm; and the other day, having that question suddenly put to him, when he had no time to arrange a favourable reply, he said, "Why, about ninety per cent. of all the reviews are favourable, and only ten per cent., or perhaps less, if both sides of the Atlantic are taken into view, are unfavourable." In summing up the criticisms thus far upon that portion of the Monday lectures which touch biology, I find that the specialists who have expressed an opinion on that fraction of the discussions here are six. First, ex-President Thomas Hill has written a review of the lectures on *Biology*; and it is favourable from beginning to end. He is assuredly a specialist in philosophy. He is a great authority and a discoverer in mathematical research. He has given unusual attention to biological science. Next, Professor McCrady, who was one of the successors of Agassiz, but who had trouble with the Darwinian party at Cambridge, as did Agassiz himself, and is now Professor of Biology in the University of the South, has written a review, as many of you know; and it is, with the exception of a few criticisms on minor points, favourable. Dr. George M. Beard, a lecturer before the New York Medical School, and mentioned with honour by Carpenter for original research in biology, has published a learned work of three hundred pages, which has been translated into German, with high commendation, by a professor at the University of Jena. This expert has written two reviews of *Biology*, and both of them favourable. He is the man

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who read the final proof-sheets of that book—every page of them—before it was issued. Professor Bowne, of Boston University, who has published a work on Herbert Spencer, which is one of the best volumes that can be referred to on that whole topic, has reviewed *Biology* favourably. He has found fault with it on a few points, and I am glad he has; but affirms that one or two criticisms made by him would now be changed, in view of subsequent discussions here.

Possibly, I ought to say that I hold in my hand a letter from a distinguished physician of London, Dr. J. M. Winn, which begins: "My friend, Lionel Beale, kindly loaned me your Boston Lectures on *Biology* to read." I had asked for no opinion from Lionel Beale. He was not ashamed to show them to his friend, at least. "This must be my apology for writing to you and expressing the great gratification I have derived from a perusal of your triumphant reply to the arguments of the materialists derived from physical science."

But I have, on the other hand, been criticised anonymously, and, as I think, not very fatally, even if a great name be behind the article. I take up a Hartford paper, and I read:

"It is now asserted that the severe review of Joseph Cook's *Biology* in the January *New Englander* was not written by Professor Asa Gray, the eminent botanist, but by a Professor Wright, of Andover. If this is true, the indorsement given to the article by the editors, as from a 'prominent scientist,' was misleading."

I beg leave to thank the Hartford newspaper for having published an assertion I have heard from doctors of divinity on the street for two weeks; but I must beg leave also to say that there is no "Professor Wright" in Andover.

It thus appears that out of six persons who have criticised *Biology*, as specialists, five are for it.

12. The great blunder which the few unfavourable critics of *Biology* fall into is, that they overlook the distinction drawn here between the two questions, "Does Death End All?" and "Is the Soul Immortal?" These inquiries are by no means synonymous. Answer the first in the negative, and you have not proved that the second is to be answered in the affirmative. It is true, however, that a negative answer to the first greatly facilitates an affirmative answer to the second. Answering the first negatively removes objections to an affirmative answer of the other. I discuss in *Biology* the first question. I think there is evidence that the materialists' alleged proof that death *does* end all is not good for anything. *This is the central proposition of the book.* Some of this proof is physiological; some psychological. The physiological part

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of it has been very significantly strengthened by the advances of microscopical and biological science in the last thirty years. I think we can make it not only highly probable, but morally certain, from physiological and psychological argument, that *death does not end all*. So far, I depend on Reason. As to the second question, I depend on Revelation, in the manner indicated in the private "creed" quoted in *Biology* (p. 306). With the average materialistic sceptic, however, the point of most importance is to show from physiology that death does not end all. Upon this point, therefore, I have concentrated attention. Careless and narrow theological and scientific critics think that I am discussing the second question, and claiming too much for the physiological argument, when I am only discussing the first. The principle involved in the argument used here is the usual one, although some of the emphases are new. As Butler, in his *Analogy*, endeavours to remove objections, and then to bring forward the Scripture argument, so this discussion which I give to the first question is intended to remove objections and prepare the way for the Scriptural argument on the second.

Several critics have overlooked my distinction between vitality and life, and so have attributed to me the preposterous notion that every cell sends a ghost into the unseen world. As to the immortality of the instinct, I make no affirmations not contained in Butler's and Agassiz's well-known positions. I deny the pre-existence of the soul. The latter topic was discussed in detail in the 97th and 98th Boston Monday Lectures, to which I refer for a fuller statement of the distinction between vitality and life.

It was my wholly undeserved fortune, the other day, to be elected a member of the Victoria Institute, the Philosophical Society of Great Britain, with the Earl of Shaftesbury for its president, and the Archbishop of Canterbury, Canon Liddon, and many specialists among its members; but I think that election must have occurred before the *New Englander* reached the other side of the water.

## MARRIAGE WITHOUT LOVE.

You are requested to appear to-day in Pliny's villa, with the statutes of Connecticut and Indiana under your arms. It will be difficult for you to obtain admission, now that the host of the unclean have been sent away behind the Apennines, unless you prove that you are not friends of the loose divorce laws recorded in these statutes which you bring from America. Cornelia, Panthea, Pliny, Phocion's wife, as you open the pages of Connecticut and Indiana legislation, stand aghast at the provisions which make it more easy to protect your property in a horse, or in an ox, or in any inmate of the yards where you shut up sheep and swine, than to protect your rights in relation to wife and children.

Before I sit down, I shall justify this strong assertion by citations from statute books; and yet I would not draw near to this infamy of a part of American law without a word on the evils of marriage without love, and a fair fronting of any philosophical defence that can be attempted for such legislation. These evils I might discuss, but everybody knows their terror. The topic of marriage without love discloses to the view of thought a ghastly host of skeletons in cupboards. I should like to have the doors closed here to-day, and all the unhappy marriages of which you have ever heard recorded on scrolls and the writings unrolled upon the walls of this temple. The more scrolls you unroll the more shy such of you as are yet unmarried will be of entering into any marriage contract without a supreme affection. Let the persons who think that the unrolling of all the secrets of unhappy marriages would dissuade any from stern Christian views of divorce, remember that a red line runs through every record of a natural marriage, and a black line through every record of an unnatural one. The red line is a supreme affection; the black line is its absence. Give me the red line unbroken from beginning to end of your parchment, and in spite of all infelicities, expressed in words which that line may inclose, I will show you a happy marriage, or at least, one that can be endured. But give me the black line, and I care not what you write inside such a border. It is all infernal and the scroll ought never to have had the first word written on it. The skeletons in cupboards some-

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times clap their hands. Let us hear them all. And, if you give voice to their toothless jaws, I care not ; for their shrieks here can be uttered only on the side of that sound doctrine which teaches that marriage is scientifically unnatural if it exists without a supreme affection.

Do you ask whether an affection of the supreme sort changes ; whether it has a quality on the endurance of which, after it is adequately tested, you can calculate ; whether there is any way of keeping permanently an affection that is really fundamental and over-powering ; whether all the poets have uttered lies when asserting that a supreme love is enduring and has offices in the world to come ; whether woman's heart and man's, so far as pure and lifted into naturalness by purity, are all organized wrongly, when their instincts assert that changelessness belongs to affection adequately tested and found out to be supreme ? Panthea and Phocion's wife, Cornelia, Pliny, and Hampden do not ask these juvenile questions.

The chief remedies for marriage without love are summed up in the provision that you shall not marry on a love that can be lost. If no man will learn to be intemperate, intemperance will be cured ; if no man will marry without a supreme affection, judicious marriage will prevent the evils of marriage without love. We might need an *ex post facto* law for a few cases ; but death will soon arrange these. As to the scientific future, we need only say that, if society will adopt the rule of Nature, and justify no marriage without a supreme affection, the evils of marriage without love will be sufficiently cured.

The world is never in order until it is conscientious. Those who marry without the consent of nature should expect trouble.

If I must put into analytical form the propositions which, after much examination appear to me to be the only ones that represent a system of straightforward thought, as to this theme, I will say :

1. The evils of marriage without love are susceptible of cure by three methods.

- (1) Prevention by judicious marriage.
- (2) Endurance by conscientiousness.
- (3) Termination by divorce.

2. The nature of things requires that there should be no marriage without a supreme affection.

3. The disregard of this natural law by marriages of convenience,

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or heedlessness, or hypocrisy does not change the law.

4. In such marriages the nature of things produces pain proportioned to their unnaturalness.

5. The nature of things is on the side of those who marry only after Providence has given them an adequately tested affection.

6. Love which is susceptible of withdrawal is not love.

7. Genuine love is possible only to the conscientious or regenerate.

8. The world is never natural until it is good.

9. Providence sends to most persons who are good the double gift of a supreme affection and a corresponding opportunity of marriage.

10. If to any this gift is not sent, they are not called to marriage.

11. The care of children may make a loveless marriage endurable.

12. Divorce must not violate children's rights.

13. The necessities of children are such that the only grounds of divorce justifiable in the eyes of science are adultery and malicious desertion.

I read these propositions slowly, one by one, in the face of my pagan jury in Pliny's villa; and I find no disgust, but only approval, in their countenances.

When I open the Connecticut statute-book, however, and put before them the articles which that State up to 1875 has indorsed since 1843, the disgust in their faces becomes overpowering, as they gaze upon the infamous record.

Lest Massachusetts should feel herself elated by the comparison of her divorce laws with those of Connecticut and Indiana, allow me to read a petition that is now before the honourable body which meets in the State-house yonder, and which is to be debated in private committee in Boston within a very few days. I ask no one's praise for giving publicity to this petition, which comes from a seaboard county of Massachusetts. It is signed by a woman who calls herself a physician, doctor of medicine. It bears several other names, presumably those of females. I shall, of course, honour them very much by presenting their ladyships here with their petition.

"To the Senate of the House of Representatives of Massachusetts, in Legislature convened: We, the undersigned, members of this community, respectfully petition your honourable bodies to abolish illegitimacy." [I am obliged to stand at a distance with



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their ladyships, lest Cornelia leave her seat on the jury, lest Phocion's wife, and Panthea, and that Pompeian daughter, and Pliny oblige me to leave his threshold with these people whom I would represent. Indeed, I am now required by the jury, speaking by Pliny, who rises yonder, to put their ladyships out of doors. They stay there, peeping through the crevices of the doors, and behind the shutters, while I am permitted to read what they have hissed into the ear of Massachusetts].—"We respectfully petition for the abolition of illegitimacy from our midst; enabling every woman who stands in the connection or relationship of a wife, in any respect, toward any man, to sustain her position respectably, by acknowledging publicly such relations and recording her name as a married woman, endowed with all the rights and privileges pertaining thereto."

The proposition is that fallen women and illegitimate children, if they exist in fact, shall not be allowed to exist in name or in law.

"In this uplifting of ourselves," the petition concludes, "we ask you to legally sustain us, removing every obstacle and extending every protection."

"Yes," Pliny says, "if you will obtain the consent of the supreme powers. Never till then! Removing every obstacle to fallen women! Removing every obstacle to illegitimate children! Making no distinction between honour and dishonour, the right hand and the left!" Pliny calls for the thunders of Vesuvius to bury under their ashes a proposition that would have incurred scorn in the city where infamy was sometimes found even in the temple of the gods.

Will Massachusetts—sufficiently moved, I hope, by the fact that petitions of that sort can get a public place on her records—listen while I cite the Connecticut law? In late years the ratio of divorces to marriages in Connecticut, is twice what it is in Vermont, nearly four-fold what it is in Massachusetts, and more than double what it is in Prussia. On the average, one hundred and eight more persons are there divorced annually than in Massachusetts, a State with two and a half times as many inhabitants. In 1866 more than half as many were divorced in Connecticut as in Ohio, a State with almost five times the population. These facts are discussed in many a document, and especially by the revered ex-President Woolsey, of Yale College.\* But his book was published some years ago, and my

\* "Divorce," pp. 179-233.

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purpose this morning is to bring the discussion up to dates. I have here an elaborate examination of the very latest statistics, made for me by authority, and I am giving you here a lawyer's interpretation of the present legislation of the great commonwealth lying yonder on the Sound. Here are the conditions of divorce which have remained up to 1875: "Adultery; fraudulent contract; wilful desertion for three years, with neglect of duty; seven years absence, not heard of; habitual intemperance; intolerable cruelty; sentence to imprisonment for life; any infamous crime involving a violation of conjugal duty and punishable by imprisonment in the State-prison; and, lastly"—this is the famous clause; this is the ground of divorce which amazes Panthea and Phocion's wife and Pliny—"any such misconduct as permanently destroys the happiness of the petitioner, and defeats the purpose of the marriage relation."

Notice the vagueness of that law and how much it leaves to the discretion of the courts.

What has been the legal practice under loose divorce laws? Why, the evidence *ex parte* in nine cases out of ten, has been inadequately tested, for the lawyer on the side of the opponent to the petitioner has rarely had the advice of his client. Divorce suits have been pushed through on the rush, between the morning session of the court and the time for dinner. Over and over most important cases have been decided on wholly *ex parte* evidence. In the law, I have cited, a nearly unlimited power over the most sacred relations of life is given to the discretion of the court. Operative force is acquired by the higher causes of divorce through the lower. Very often the higher are put into a legal complaint, only to make a noise, when there are no facts behind them; and finally a divorce is decreed on the lower when the charges on the higher have failed. President Woolsey says ("Divorce," p. 228): "Connecticut is at the bottom of the list. The ratio of divorces to marriages is nearly fourfold that in Massachusetts, and much more than double that in Prussia" which has had the armies of Europe storming over her for the last century and French fashions polluting her age after age.

What are we to say, when before our pagan jury we can bring up only regulations of that sort to show the tendency of divorce on in this country? I have no time to go into details of the Indiana legislation. They are not quite as bad as those of the Connecticut law. Are we to affirm that the Biblical ideals can

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no longer be enforced? Are we to say that they are not scientific? What are they? Here is the next to the most important question to be discussed under the topic of marriage without love. For what reasons may marriage be ended? I suppose that the Scriptural doctrine on this point is very well settled. One cause of divorce there is no debate about. We all know that a certain crime can make those who have been one, two; and that, in the eyes of Him who spake as never man spake, there is in that case justification for divorce. Yes; but you say Paul was ascetic. He differed from the law of his Master. But, on the basis of Paul's writings it is taught that malicious desertion is another ground of divorce justified by the Scriptures. I know that there is a debate on this point; but it must be affirmed, I think, that the two grounds of adultery and malicious desertion are recognized as a sufficient occasion for divorce; and that Christian scholarship will not debate with legislation, even if malicious desertion be interpreted to mean ten years' desertion without being heard from. Of course, there would be a debate with legislation if any trumpery period of absence were called malicious desertion. There are many definitions of that phrase; but if you really prove malicious desertion you prove that there exists a Christian ground for divorce. So that, on the basis of these two propositions, there might be a harmony of sentiment between Christian scholarship and secular legislation. Nevertheless, we find secular legislation running on till it makes divorce easy, against which all standard writers on social law have warned us—not excepting even David Hume. What did he say? Hume was as ascetic in relation to divorce law as Paul. I know what loose opinions Hume had of crime outside of marriage. You must not suppose I am contradicting what I cited from Hume the other day; but Hume knew what law is, and yet he was without Christian prejudices as to marriage. Although I have denounced some of Hume's views as infamous, I must not lack the discrimination to show you that other views of his are sound. When men stand up and call Paul ascetic, when Strauss attacks the New Testament for ascetic ideas on the topic of divorce, I would like to call Hume to the lattice-work here, and let him look into the faces of our pagan jury, while I read his opinion.

*"We need not, therefore, be afraid of drawing the marriage knot, which chiefly subsists by friendship, the closest possible. The amity between the persons, where it is solid and sincere, will rather gain by it; and where it is wavering and uncertain, that is the best*

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expedient for fixing it. How many frivolous quarrels and disgusts are there which people of common prudence endeavour to forget when they lie under the necessity of passing their lives together, but which would soon be inflamed into the most deadly hatred were they pursued to the utmost under the prospect of an easy separation. We must consider that nothing is more dangerous than to unite two persons so closely in all their interests and concerns as man and wife without rendering the union entire and total. The least possibility of a separate interest must be the source of endless quarrels and suspicions. *The wife, not secure of her establishment, will still be driving some separate end or project, and the husband's selfishness, being accompanied with more power, may be still more dangerous.*"\*

Pliny rises and reads proudly the definition of marriage as given by Modestinus, the eminent scholar of Ulpian, at the beginning of the third century. A similar one in the "Institutes" has passed into canonical law. The celebrated words which Pliny emphasises, contemplate the perpetuity of the marriage union of one man and one woman, as essential to the nature of the institution. They are *Nuptiæ sunt conjunctio maris et feminae et consortium omnis vite divini et humani juris communicatio.*"†

Panthea, Phocion's wife, all this jury endorse Hume; and when the petitioners to the Massachusetts legislature, when the Indiana legislators, when the loose sentiments that have justified these lax divorce laws come before our pagan tribunal, the only reply they meet is a prolonged hiss and curse. Experience writes once more across the wall *Mene, mene, tekel, upharsin*; and these petitioners, gazing upon the Hand that comes forth from the Unseen, see that they, in the scales of the scientific method, are weighed in the balances and found wanting.

\* Hume's "Philosophical Works," Vol., III, pp. 208, 209. Am. ed., Boston, 1854.

† Compare "Institutes" of Justinian, 1-9, §2.

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JOHN MILTON, Michael Angelo, Goethe, and Byron are at the door of Pliny's villa, and ask to be received as guests. There is with them Elizabeth Barrett Browning. Goethe and Byron desire to be received to the hospitalities of the villa and on terms of social equality with their fellow-travellers. The pagan jury ask who these people are. In reply, I request Pliny to listen to a statement, in his own language, of John Milton's experience when a young man in Italy : "*Deum hic rursus testem in vocem me his omnibus in locis ubitum multa licent, ab omni flagitio ac probo, integrum atque intactum vixesse, illud perpetua cogitatem si horinum latere oculos possem, Dei certe non posse.*"

In other words, John Milton affirms that, when a young man in the midst of the temptations of Italian cities, he lived, as he can call God to witness, a life perfectly fleckless ; and that he did this because he constantly thought that, although he might escape the eyes of men, assuredly he could not those of God. Panthea and Phocion's wife and Pliny are further informed that John Milton deserves to be credited when he says this, and he is admitted to the guest-chambers.

Who is Michael Angelo ? There was a Vittoria Colonna, and this Angelo was her friend. With Renata of Ferrara, and Margaret of Navarre, she made up a triumvirate which led the culture of all Italy where there was a hope that Italians, under the inspiration of Ochino, might have a political, as well as a religious, Renaissance. Pliny is told that, among the seven hills of Rome, this Michel Angelo lifted up another hill, the dome of St. Peter's. "I will hang the Pantheon in the air" was his phrase before he began work on that structure. Pliny is also informed that in the city of London, in Hyde Park, where men of our day have erected a monument to Prince Albert, and have chiselled upon it the figures of the great of all the centuries, the only man whose figure is repeated twice is this same Angelo. Raphael sits in the panel which celebrates the history of painting, and this Angelo leans upon his chair. Then, on the panel which celebrates the history of architecture and sculpture, Angelo is repeated in the centre of the group. But more noble than the best achievement of Michael Angelo in architecture, more touching than anything he did in marble, more

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majestic than that dome of St. Peter's, is this sonnet of his, written to Vittoria Colonna. As I am able to assure Pliny, it is worthy of being trusted as a statement of the truth. Condivi says, in his life of Angelo, that the man was almost insane at the death of this Vittoria Colonna. We have all heard how Angelo went into her room, when life had left her body, and how he stood there, strong man as he was, and ventured to kiss the back of her hand. He said to Condivi, that he never blamed himself for any one omission quite so much as for his having thought it best not to kiss her cheeks and her forehead in that last farewell. This mighty sculptor and architect was a singer also. Perhaps of all sonnets addressed by man to woman this by Michael Angelo to Vittoria Colonna is the best:

"The might of one fair face sublimed my love,  
For it hath weaned my heart from low desires;  
Nor death I heed nor purgatorial fires,  
Thy beauty, antepast of joys above,  
Instructs me in the bliss that saints approve;  
For, oh! how good, how beautiful, must be  
The God that made so good a thing as thee,  
So fair an image of the heavenly dove.  
Forgive me, if I cannot turn away  
From those sweet eyes that are my earthly heaven,  
For they are guiding stars benignly given  
To tempt my footsteps to the upward way;  
And if I dwell too fondly in thy sight,  
I live and love in God's peculiar light."\*

This man is admitted to the guest-chambers of Pliny's villa.

But who is Mrs. Browning? Worthy to be read next after Angelo's words is many a phrase of the famous Portuguese sonnets—the best expressions of love ever addressed in literature by woman to man. Pliny will allow me to read only one short statement of the mood of this woman's heart:

"Yet love, mere love, is beautiful indeed,  
And worthy of acceptance. Fire is bright,  
Let temple burn or flax! An equal light  
Leaps in the flame from cedar-plank or weed.  
And love is fire: and when I say at need  
*I love thee . . . mark . . . I love thee!* . . . in thy sight  
I stand transfigured, glorified aright,  
With conscience of the new rays that proceed  
Out of my face toward thine. There's nothing low  
In love, when love is lowest; meanest creatures  
Who love God, God accepts while loving so;  
And what I *feel* across the inferior features  
Of what I *am* doth flash itself, and show  
How that great work of Love enhances Nature's."

This woman is admitted to the guest-chambers.

Who is Goethe? Can he be received on terms of equality with

\* Michael Angelo, translation of J. E. Taylor.

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Milton and Angelo and this woman? When I was in Weimar, I looked two days to find the grave of the wife of Goethe, and looked in vain. No one reveres more than I do this man's intellectual record; but will the brilliancy of his career in that particular admit him here to gaze on Panthea's eyes and those of Phocion's wife? A pagan jury is now acting as a host, and is not willing to mix moral opposites under the same roof. Goethe's biographer says that nobody knows where his wife is buried. Who was his wife? Mrs. Browning must hear the record. Milton must, and Angelo. In Weimar I stood in sight of Goethe's mansion and read this record. On one of his visits to Italy, Goethe left his child in the care of Herder, and it was eight years before Goethe's marriage. You feel your flesh creeping upon your bones, when, in Germany, which loves the home-life so profoundly, you stand, as I stood once, at the heads of the cenotaphs of Goethe and Schiller, in that cemetery at Weimar, and find Schiller's coffin covered over with silver leaves by the mothers and daughters of Germany, and Goethe's bare. No doubt, more lectures are delivered in the universities on Goethe than on Schiller; but it is the latter poet, with the really German domestic record, who expresses the heart of the Teutonic land. His tomb is wet with tears ten times where Goethe's is once. I dare predict that in time to come the emotional side of the domestic portion of the German nature will have Schiller with his German ideals, for its representative; and not Goethe, with his French ideals. Remember how the evils of the court life of Versailles had corrupted Germany, how little Weimar aped French fashions; and yet you cannot excuse this man for his record. All that his best biographers claim is, that the evil in his life has been exaggerated in popular judgment. It is certain that he was guilty under the natural laws revered by Angelo and Mrs. Browning and Milton. He was so guilty that his own nation at this moment stands with blushing cheeks to apologize for his record. Whatever Goethe may have become in his later years, whatever Goethe may be now, we must say of him, as he stands here, just returning from Italy, his child living north of the Alps, and he an unmarried man, that he is not a fit companion for John Milton and Mrs. Browning. This pagan jury are of that opinion; and I read to them Emerson's saying, that Goethe was "incapable of surrender to the moral sentiment," and so we "cannot really love him." He is not admitted to these chambers.

But will Byron be? What is his record? Walk backward and conceal the shame. A brilliant intellect, assuredly! But can he go in here to face Panthea and Phocion's wife? Can he be admitted on

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terms of social equality to this villa, which has only pagan guidance? We are consulting great Nature in looking into the faces of this jury. I speak in metaphor. This is only one way of presenting a very dry and intricate theme. Twenty ways might be chosen. Goethe and Byron stand there and plead for themselves. They now look through the lattice-work; and they demand why Mrs. Browning and Milton and Angelo are received, and they shut out. Acting as interpreter of Nature, I risk the reputation of science upon these propositions, which I read to the jury, while I ask you to watch the faces of Pliny and Phocion's wife and Panthea :

1. General society now is thought to be lax in regard to the execution of the penalties of seduction and adultery.

2. If however a brother or a husband detects a leper in either of these crimes, and shoots him dead, not one jury in ten will inflict any penalty upon the outraged avenger.

That is a modern fact, and a pretty large one, from the scientific point of view.

3. Social life and law thus proclaim their opinion that death should be the penalty of seduction and adultery.

4. This penalty was actually required by the Puritan civil enactments.

5. If modern law is more lax, the rule of excusing private revenge justifies the principle involved in the Puritan legislation.

6. Great Nature speaks, in all this volcanic justification, of purity.

These men at the lattice-work have been guilty of the things for which, when avenged, murder itself is condoned. Both of them have been guilty. Pliny's face is that of Nature; it has in it only manliness. Panthea's face is that of Nature; it has in it only womanliness. But under the rays of the eyes of these two representatives of paganism, Goethe's eyes go down and Byron's quail. You know that that is the way these forces are balanced.

You are yourselves a part of this jury. You are the hosts in this villa. I venture to affirm that the free leper's theories cannot begin a detected execution of themselves, in practice, without the risk of his being shot dead by many a man here and many a woman.

7. There is nothing which quails so quickly before outraged purity as outraging impurity.

Whoever knew a man guilty, as these petitioners at the lattice-work have been, that could meet the eyes of a Milton, or an Angelo, or a Mrs. Browning? Undoubtedly, if persons far their inferiors in intellectual power stand up for the heart of great Nature in their presence, the former can be cowed. But, other things being equal,



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who ever saw an adulterer or a seducer that could look into the face of a man his equal in other respects, and pure, and not quail? That is the scale in which Nature weighs men. Whoever thinks it safe to stand in the lighter scale to be weighed by the judgment of ages to come, had better look backward, and see how every great reputation that has had this infamy in it, has, little by little, lost its place. We were reading Byron a few years ago as if he were inspired. Woman is giving the world a new literature. Mrs. Browning is here, and knows how poetry has been purified. Where will be the place for the Byrons a century hence? The trend of the central currents of literature prophesies a better social world than any in the past. These experiences of Angelo and Milton and Mrs. Browning indicate what the race is capable of, and what is the best possible to man. Ultimately you will find the race pressing toward the best possible.

We are very careless when we allow social lepers to use sacred words to cover infamous things. "Love!" Pliny says, rising here. "These men have not loved. Did not poor, guileless Margaret, in Faust, written by this Goethe beyond the Alps, stand up and look upon the forehead of Mephistopheles, and say: 'It is written on his brow that he never loved a living soul'? This which is true of Mephistopheles is true of all his children. The lepers' league of cancer planters! Neither he nor they ever loved a human soul. Let us not call a free-fancier's contract marriage. All accepted definitions make marriage a union of one man and woman for life. It is mischievous to allow the friends of loose divorce to call by the sacred name of marriage what, correctly described, is only a free-fancier's contract, or free leper's contract. Free lover! Free leper is the better name."

In Pliny's countenance there is a thought which we must interpret, though we cannot whisper it. Pliny is instructed in modern investigations. He lifts up before his jury, though he cannot open the books, the great name of Acton, who says that no man can claim that Nature forced him into vice. He lifts up here Bourgeois, laureate of the Academy of Medicine of Paris, and might cite a score of names proclaiming that Goethe and Byron, when they assert that Nature is on their side, go beyond the dictates of modern science. He quotes Max Simon, Duffieux, Diday, Mayer, Brigue, and Fredault, all Frenchmen and men of science, writing in the heart of Paris, against all the excesses of Sardanapalus.

The jury are now agreed. I do not find that Pliny and Panthea and Cornelia and Phocion's wife and Hampden are unworthy to receive Milton and Angelo and Mrs. Browning as guests. While the high greetings pass between these elect souls in Pliny's villa, how shall we

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interpret the secret thoughts which flame in the sacred lights in all their countenances? Thomas Carlyle's words shall close my plea to this jury:

"To burn away in mad waste the divine aromas and plainly celestial elements from our existence; to change our holy-of-holies into a place of riot; to make the soul itself hard, impious, barren! Surely, a day is coming when it will be known again what virtue is in purity and continence of life; how divine is the blush of young human cheeks; how high, beneficent, sternly inexorable, if forgotten, is the duty laid, not on women only, but on every creature, in regard to these particulars? Well, if such a day never come again, then I perceive much else will never come. Magnanimity and depth of insight will never come; heroic purity of heart and of eye; noble pious valour, to amend us and the age of bronze and lacquer—how can they ever come? The scandalous bronze lacquer age of hungry animalisms, spiritual impotencies and mendacities, will have to run its course till the Pit swallow it."\*

\* Carlyle, *History of Frederick II.* vol. ii. pp. 29, 30.

## OBSTACLES TO MARRIAGE.

IF there is any unmarried person in this assembly who is yet to be married to one of his own age, she who is to become his wife is now living on the earth. Approaching once more Pliny's villa, we find Cornelia, mother of the Gracchi, advising her sons to keep themselves pure, so that all the blessings of a virtuous home may be theirs. She asks the younger Gracchi to remember that their wives are now living on the earth, and to pray for their weal, although as yet they have not been seen by their future husbands; and to pray for the weal of those husbands, although as yet they have never been seen by their future wives. "Your best preservative," you overhear Cornelia say to the Roman Gracchi, "is anticipation. Think that you wish to win a white soul, and you will be unwilling to give less than you bargain for. In the midst of the corruptions of Rome, remember that she who is to be to you what I have been to Titus Gracchus will require—if she is what I am—that you should be to her what Titus Gracchus was to me. These Greek tutors which I have employed," continues Cornelia, addressing her sons, "have been instructed by Plato and by Socrates, and they have taught you reverence for natural law. When a supreme affection is given us, we are to take it as a Divine sign that God intends a certain course in life for us. Anticipate that God will be as good to you as He is to most men. In due time He will open a home for you. In due time you will come to the hearthstone, which even now He is putting together, piece by piece. In due time there will be for you an opening of the gates which enter the most sacred temple in which man can worship. Prepare afar off for the event which Providence prepares for you afar off. If the Sirens sing, take them to your future hearthstone; and, looking on it, turn your back upon what will be no temptation as long as your heart is warned by this anticipated family fire."

You agree with Cornelia that anticipation is a preservative in the social life. You will have her sympathy if you examine with unconcealed indignation whatever unnecessarily prevents this healthful anticipation. I am to discuss the Modern Obstacles to Marriage, or Hindrances to the Formation of New Homes. I come once more before my jury, containing Pliny and Cornelia and Phocion's wife, and these are the propositions upon which to-day I ask their opinion:

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1. "God," William Shakespeare says, "is the best maker of all marriages."

2. With relatively few exceptions, He sends to every man and woman the double gift of a supreme permanent affection and of opportunity to follow it in marriage.

3. Were all conscientious and were health universal, these exceptions would be fewer.

4. Natural law requires that where this double gift is sent, it should be respected as a Divine indication that a new home ought to be founded.

In a natural world, a supreme will be a permanent affection. But a supreme and permanent affection of this sort arises only between two. God does not send this double gift at haphazard. Behind every supreme affection there are forces of the most terrific potency, and they are all natural forces. They are actually Divine. Whoever utters the phrase natural law, without understanding that he is speaking of God's will, is yet unscientific. Therefore, we may assert, without danger of disloyalty to the scientific method, that natural Divine law requires that where this double gift is sent, it should be respected as a Divine indication that a new home should be founded.

5. But the self-support of homes is also a natural law.

You think that I am incautious; but I remember that I am in the presence of Pliny, who is a statesman, and that he will listen to no mere sentiment on this topic. I keep in mind the fact that we must have a fire before we set upon it the viands to be prepared for the family meal. The rudest proverbs of the rudest nations proclaim that we must have a fire before we buy the kettle.

6. Obstacles to marriage, or hindrances to the formation of self-supporting new homes, are obstacles to the free course of Divine natural law.

Keep your faces upon this jury.

7. The unit of society is the family.

8. The strength of a nation is in proportion to the number of its virtuous—that is, of its natural—homes, founded upon supreme affections.

9. Society, as organized at present, throws many inexcusable and even wicked obstacles into the course of Divine natural law as to the formation of new homes.

10. Among these natural and removable hindrances are :

(1.) Absurd expensiveness of living.

(2.) Mistaken social pride.

(3.) Low salaries.

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(4.) Unwise parental interference.

(5.) Poor opportunities for acquaintance between marriageable persons.

(6.) The corruption of portions of society.

Pliny bows his head at the proposition that virtuous homes are the foundation of the State. We need power to throttle communism. The State needs loyalty to just legislation. We want protection for property and for life. Let us follow Emerson's advice, and attach our chariots to the stars. Civil society needs the terrific forces which lie behind the supreme affections to guarantee the execution of law. Let civil society, therefore, foster family life and frown on its enemies. We know that, as Shakespeare has said, "even a bad man in love becomes better than is his wont." We know that it is impossible to pass even that tomb—in the Père la Chaise, in Paris—of Abelard and Heloise, without a certain solemnity, for it was possible that there was a supreme affection there, although no opportunity for marriage, and so no Divine sanction for what happened. There is a solemnity in the undying force of virtuous passions. Attach your civil and social chariots to the stars in the azure of pure love. Let the transforming power which makes a man or a woman new, which gives to a man the womanly traits and to a woman the manly, which is the only builder of permanence in any social arrangement—let this virtuous supreme affection, let family life be the foremost chariot-horse for the State. I see no fair hope of guidance for the future unless this double gift of God, by which He indicates His will that new homes should be founded, is made one of the chief steeds of celestial fire to draw legislation, property, life, through what have been dark ways of history in time past, and are likely to be dark ways in time to come, if the home be undermined.

Communism asks for the abolition of property. Socialism demands the abolition of the family. If it is not your duty to put your ear upon the surface of the ground, and listen to the communistic speculations in the slums of our cities, you will hardly credit me when I say that the surface discussions on these topics are only the outcropping edges of great boulders that run down beneath society. Along the sterile hill-slopes of New England, you pass the plough through the soil; but you get no crop. Why? There are hidden stones beneath the sod. Just so the churches, good literature, whatever there is noble in human society, plough the surface of some sections of our municipalities, and get no crop. You say that the outside of the sod is decorous. I tell you that just beneath lie various forms of infidelity to the family, and that while these boulders are close under the sod

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you must expect nothing but barrenness, even after ploughing and rain.

But Pliny is of opinion also, that I am not sentimental in saying that God does give to most men and women not only a mate, but a mate obtainable. The definition of this double gift, which I call a Divine indication that a new home ought to be founded, is a mate and a mate obtainable. I keep in mind all the collisions of the passions; I have brooded over many points on this topic which cannot be discussed here even in whispers; but I see no objections to the propositions I have read to this jury. In the name of natural law, it cannot be denied that when this double gift is given there ought to be a new home founded.

I am supposing that the double gift rests upon virtue. I am presuming that the supreme affection is permanent, because it admires that which does not change.

I have no faith at all in underrating the natural laws when they require conscientiousness. We endeavour to heal society without making it good. The world is a complex scheme, and the first tutoring it needs is that which will induce it to surrender to moral law. After that surrender, how reform will swim! We try to set out ships afloat in the sand. We try to reform marriage and push our vessels off the strand, when as yet they are not off the rocks. As long as they lie there, they must expect disaster. Nevertheless, marriage may float in a smooth sea.

Until we have a natural—that is, a conscientious—world it cannot be known by experience what natural law will do for the gratification of a supreme affection; but, if you will give me that world, there will be in it very few not called to marriage, provided society allows proper opportunities for acquaintance between marriageable persons.

Do not smile, my friends, if I ask you to remember that Horace Bushnell, writing his book on the reform against Nature, and with all his saintliness, with all his marvellous knowledge of the human heart, was willing to stand up before the world and suggest that the churches themselves should study opportunities of increasing virtuous acquaintance among marriageable persons.

“Can the Christian pulpit itself,” says Horace Bushnell, “be true to its office without applying itself, as things are now going, to the correction of our false views of marriage and the consequently diminishing frequency of marriages? If there is a postponing on one side, instigated by a pompous and hollow ambition, utterly wide of the beautiful meaning of the family state; if on the other, where the poison of the same ambition also works, there is a consequent loss of

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hope and a turning away to go into fight with men in the rougher terms of equality, is it not time for the teachers of religion, the true guardians of society, to ask what duties may now be incumbent on them? And is there not, besides, a possibility of accomplishing something in this matter by organization, and so of doing more, a hundredfold, to relieve the oppressive overstock, under which so many fine women are stifled, than will ever be done by all the office rights and voting privileges they are now so eager to obtain? Such an organization, working only for names that are given or by friends suggested, and presuming only, under strictest bonds of secrecy, to suggest, commend, and prepare acquaintance in ways of proper delicacy, might bridge a great many gulfs of false modesty, perhaps, that will otherwise be for ever impassable. In this kind of reform there is nothing unhopeful or impossible: for it is according to Nature, and not a reform against Nature."\*

I suppose that I shall be accused, even under the shadow of Horace Bushnell's name, of lack of caution in mentioning this theme. But who does not know that in the more luxurious portions of society, and in those parts that call themselves the most highly cultured, it is almost impossible to obtain the truth as to the character of one who may be the weal or woe of a new home. It is a matter which has had curious treatment in many a nation—this absence of opportunities for acquaintance. When I was in London, I took up, one day, a respectable newspaper, managed by a man who gave his name and who had the endorsement of members of the nobility and of one or two of the clergy. I had every reason to believe, from what I heard, that the newspaper was a respectable one. It was devoted wholly to the multiplication of opportunities of acquaintance between marriageable persons. I am willing you should smile at such a means of increasing the opportunities of acquaintance between the members of this class; but nobody knows what worse straits we shall be forced to, if there is not a little more attention paid to that part of natural law. Co-education of the sexes! I am not discussing that topic. How many sociables shall there be in a church? I do not discuss that theme. What use we shall make of our parlours, in a social way, I do not volunteer to affirm. But this I do say: that in a haughty, exclusive, aristocratic world, it is pretty hard for a man to know a few things he would be very glad to learn.

How shall I blazen here with proper vividness the infamy of a mistaken social pride, which will not marry until it can equal the

\* Bushnell, *Women's Suffrage*, p. 95.

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display of some parent who has had a life in which to accumulate a fortune? How shall I set the proper stamp of scorn upon that class of young men who are too full of poltroonery—I am not speaking now of those who are full of putridity, and who are beneath our attention here, and who have been sent beyond the Apennines by Pliny himself; but of those men who live a pure life, and who are too full of poltroonery to take each a better than himself and found a new home. Why do they delay. They have income enough. Why are they so tardy? They are in the thirties. They could found a new home. It may be that God has sent them his double gift. But they cannot drive a coach-and-four quite yet. They can drive a coach-and-two; but, waiting for a coach-and-six, they finally are carried into their forties, and sometimes into the desolations of confirmed bachelorism.

I dare not assert that a single life is desolate, if a supreme affection has been sent to it. Science has sometimes affirmed that a man to whom a supreme affection has been sent is married! Under the dying-pillow of Washington Irving there were found a lock of hair and a miniature. Who will say that he led a lonely life? It is taught by some that the whole physical form is changed by a supreme affection. If a mate is sent, but taken hence, one is in Washington Irving's position, and never lonely. Such persons are married; and God is the maker of such marriages; and the breaker-up of them; and the re-uniter of them, let us hope, in another state of existence.

When both these gifts are sent—a supreme affection and an opportunity to found a new home—it is dastardly, it is a flat defiance of the instincts of the soul, it is a deep infamy upon manhood, not to be willing to dare something for the love that one dares call supreme.

Is it too much to assert that modern society deserves, perhaps, as much censure as infidelity itself for its hindrance to marriages? You have heard me, on other occasions here, assailing infidels for their attack on the family; but what shall I say of this mistaken social pride, this absurd expensiveness of living, which in many ways are more mischievous in preventing the founding of new homes than the voices of infamous social theories themselves. Poor Richter was always poor, and he married when he had hardly more than one room in a German cottage in which to live. Richter affirms that "no man can live piously or die righteously without a wife." A sentiment which I cannot say that I think science endorses. Some men can. But I must affirm, with Richter, that the man who, when a supreme affection has been sent him, and an opportunity to found a new, self-supporting home, is yet determined to live alone is living neither happily nor righteously. The man who does not look forward with



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Cornelia's prescience, and endeavour to form his own hearthstone by anticipating what he will be by-and-bye, is a man likely to fall into temptation easily, and to be drawn away from virtue.

Dip the soul into the seas of ink, and it ceases to be really marriageable. Put out the fire of honour in the heart, and it cannot be made warm at a blazing family fireside. These men who shiver through the ways of vice, their skeleton souls without trust, how shall they be warm before their future hearthstones? The leper puts out his own family fire. Treat one human being in an infamous manner, and you never will treat another human being in the manner provided by natural law. Only he who will look onward and afar, and keep the family fire, or the opportunity to kindle it, bright, is likely to keep out of the pits of perdition. Pointing to these rifts of Gehenna; showing you the bright flames protruding themselves every now and then through these volcanic crevices; exhibiting to you, as you come to their ashen, treacherous edges, how destruction blazes in the lower throat of the chasms, I beg leave to arraign—this absurd expensiveness, this mistaken social pride, low salaries, unwise parental interference, and poor opportunities of acquaintance between the marriageable classes. So far as they violate natural law, the coolest science must condemn all these social forces as guilty of pushing men toward the pit of blue fire.

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### PRELUDE.

I HOLD in my hand a most respectable journal of microscopy, published in Paris. There is in it an elaborate account of microscopical investigations conducted in Massachusetts by two of her experts—Dr. Cutter, of Cambridge, and Dr. Harriman, of Boston. These gentlemen have made photographs of the healthful and diseased appearances of the disks of the blood. You know that the blood is made up of three elements—a thin fluid, a multitude of red disks, and a few white corpuscles. The red disks and the white corpuscles of the human blood, science has put under the microscope, and found that they change their shape in different ways in different diseases. The claim is now made that the character of certain diseases can be found out by ascertaining the changes which have been produced in the shape of the blood corpuscles. The audience sees this handkerchief (holding up a handkerchief folded into a flattened ball). Suppose it to be folded into a round mass or a disk of symmetrical proportions. Now suppose that there shoots out of it a root at the lower part (changing the shape of the folded mass). The change between the round form and that caudated form is not greater than certain diseases produce in the form of the red blood corpuscle, and especially in the white. This lectureship has been accused of taking facts at second hand. Next Monday, at eleven o'clock, the great hall of Tremont Temple will be darkened, the best microscope in Boston will be put in that gallery, and representations of these disks will be thrown upon a screen here by the stereopticon. The results of certain recent Boston researches, of which this French journal speaks so highly, you will have an opportunity to see,—the first of all audiences in the world. The red blood corpuscles, when properly magnified and thrown upon the screen, will have a diameter of some ten or twelve feet. The gentlemen who have volunteered to assist the lectureship in putting these facts before the public are those who have given great professional attention to the matter, and who are commended in the warmest terms in the *Journal de Micrographic*,\* both of them by name. A large degree of commendation is here given to Mr. Tolles, our Boston maker of microscopes, who is regarded as a child of fortune, because he has produced a one-seventy-fifth objective. Of this magnificent instrument you will have opportunity to make an inspection. The photographs which will be put before you are in large part its work. What may come from the investigation of the changes of shape in the disks in the blood I do not

\* November, 1877, pp. 309, 310.

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undertake to say ; but this I do know, that science at the present moment stands with hushed breath before the question whether diseases can be traced by the changes they produce in the shape of the blood corpuscles. The blood is the life, we are told ; and nearer and nearer investigation comes to the heart of biology. Science can show you the blood corpuscle changed by diseases too infamous to be mentioned from the round shape to a sprouted shape. On the topic of hereditary taints in blood you will need little eloquence on my part, after the facts at first hand, as ascertained by perhaps the best microscope in the world, have been put before you,—first of all audiences on either side of the Atlantic.

### THE LECTURE.

The survival of the least unfit will ultimately give the world to the fittest.

When music rises in a city street, every man who hears it with his soul forgets the uncouth noises with which it contends, and becomes in some sense a poet and a prophet. When we listen to the melody of what the best writers say concerning woman, and find that among all the barbarous cries of time this lofty anthem rises victoriously and is remembered age after age, because it possesses inherent fitness to command, we are made poets and prophets and naturally anticipate a better world. When I hear great music, I feel sure that the vexed centuries will be put in order at last. In all noble melody there is a suggestion of a melodious final arrangement of the human events. Goethe said that level roads lead out of music in every direction. So they do out of the love of love. The immense inspirations of woman's character always elevate us, as music does, to a height from which we anticipate better ages.

If I mistake not, the inculcations of the most valued literature as to woman and marriage have been growing higher in the last five hundred years. If I can show that literature is singing a loftier and loftier song, or presenting a higher and higher ideal of excellence in woman's character and of what is best in marriage, perhaps you will ask whether, under the law of the survival of the fittest, there is ground for hope that the world will by-and-by keep step with its best melody. I shut the Scriptures here, not because they are underrated, and not because it is forgotten for an instant that they have inspired this higher melody of modern literature. All my inquiry is included in these two questions :

Have the ideals literature presents as to excellence in woman's character, and as to what is best in marriage, risen in the last five hundred years ?

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*Where shall we find room in social custom and public law for that form of womanly character which literature makes us love best?*

1. The enduring literatures of the world are approved by the law of the survival of the fittest.

2. They indicate what is natural to man.

3. What the ideals of enduring literatures teach as to marriage is, therefore, an indication of what is natural in marriage.

4. The ideal of marriage and the ideal concerning excellence in woman's character have always risen or fallen together.

5. The latter has risen with the advances of modern literature.

6. Shakespeare and Goethe both had unfortunate experiences in marriage, and both depict fully the evils of ill-assorted unions.

7. Shakespeare and Goethe are to be judged by the rule that we are to notice what an author of fiction makes us love, if we would know what he intends to teach.

8. The women whom Shakespeare makes us love are Helena, Portia of Belmont, Viola, Portia of Rome, Isabella, Ophelia, Cordelia, Miranda, Hermione, Perdita, Desdemona, Imogen, Catharine of Arragon, Juliet.

9. It has often been asserted that, next to the Christian religion, humanity has no other so precious inheritance as Shakespeare's divine gallery of womanhood.\*

Were it policy to go into unessential detail, I might fill up an hour with the illustration of that single proposition; but in this presence one can put foot only on mountain-tops. The difference between an essay and an oration is, that the essay goes into the valley and lingers in the nooks and corners. The oration puts foot only on summits. You never have been able here to bear that I should deliver an essay.

10. But Goethe, three hundred years later than Shakespeare, advances beyond even Shakespeare's ideals, by making his best female characters yet more thoughtful, religious, far-seeing, educative, and more nearly the equal intellectual companions of men. Natalia and the fair Saint, in *Wilhelm Meister's Apprenticeship* and *Travels*, are loftier or, at least, more perfectly developed female characters than any which Shakespeare has drawn.

Here, of course, I must pause to justify these propositions face to face with the record of these two writers. I am now answering the question, What are the women that literature makes us love best? We know what literature has escaped oblivion; and the ideals of that literature are surely a phenomenon on which science ought to cast a glance. If I am to ascertain in what direction the great gulf current

\* Hudson, Gervinus, Mrs. Jameson.

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of human aspiration tends, show me what literature is selected out of the mass which perishes, and is allowed to continue its power in the world. This Shakespeare, you say, was a roisterer. He was the master of the amusement of the globe. Do you think that a free-fancier's contract might have pleased him, and that he is not to be taken as an authority against loose ideas of marriage? How does he make Juliet speak on the point of a free-fancier's contract?

"Oh! bid me leap, rather than marry Paris,  
From off the battlements of yonder tower;  
Or walk in thievish ways; or bid me lurk  
Where serpents are; chain me with roaring bears;  
Or shut me nightly in a charnel-house,  
O'ercovered quite with dead men's rattling bones,  
With reeky shanks and yellow chapless skulls;  
Or bid me go into a new-made grave  
And hide me with a dead man in his shroud—  
Things that, to hear them told, have made me tremble;  
And I will do it without fear or doubt,  
To live an unstain'd wife to my sweet love."

—*Romeo and Juliet*, Act iv. Sc. 1.

This is the roisterer Shakespeare. This is the woman whose character he makes us love. We are to suppose that he admired what his subtle power over dramatic forms makes us admire. Is Shakespeare to be called on to answer the question whether there is a difference between love and fancy? If a fancy be coarse, we have a frank name for it; if it be infamous, we have yet a franker name, which had not dropped out of use in Shakespeare's time, thank God! It is a great infelicity in the French language that there are not two words for the activity of heavenly passion and of earthy. It is an infelicity in the English language that there are two words for the two things, and that we often allow the white word to be used for the black object. Shakespeare, however, wishing to draw a distinction which ought to be burned into the thought of civilisation, does not hesitate to say in language more exact than much of ours:

"Love comforteth like sunshine after rain;  
But lust's effect is tempest after sun.  
Love's gentle spring doth always fresh remain;  
Lust's winter comes ere summer half be done.  
Love surfeits not; lust like a glutton dies.  
Love is all truth; lust full of forged lies."

—*Venus and Adonis*.

This Shakespeare was master of the world's revels, you said; but, in emphasizing that distinction, he is master of the world's social philosophy. Turn back from these words of his youth to a play written in his age, and you find the distinction between fancy and love drawn with equally unwavering lines:

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"For several virtues  
Have I *liked* several women ; never any  
With so full soul, but some defect in her  
Did quarrel with the noblest grace she ow'd  
And put it to the foil. But you, O you,  
So perfect and so peerless, are created  
Of every creature's best !

Do you *love* me ?"

—*The Tempest*, Act iii. Sc. 1.

To like and to love are thus, with Shakespeare, two things. When you insist, as he does, on this distinction, you will not be surprised to hear his answer to the question whether love of the genuine kind is fickle, or whether, when the adequate tests of a supreme affection have all been borne by the passion called supreme, that passion is likely to change. This roisterer, this master of the world's revels, undertakes to assure the ages that love is not fickle, if it be worthy of that name.

"Let me not to the marriage of true minds  
Admit impediments. Love is not love,  
Which alters when it alteration finds ;  
Or bends with the remover to remove :  
Oh ! no ; it is an ever-fixed mark,  
That looks on tempests, and is never shaken ;  
It is a star to every wandering bark,  
Whose worth's unknown, although his height be taken.  
Love's not Time's fool, though rosy lips and cheeks  
Within his bending sickle's compass come ;  
Love alters not with his brief hours and weeks,  
But bears it out e'en to the edge of doom.  
If this be error, and upon me proved,  
I never writ, nor no man ever lov'd."

—*Sonnet cxvi.*

Did Goethe rise higher than that? Returning from Italy as a young man, he was refused admittance to Pliny's villa on terms of equality with Milton, Angelo, Mrs. Browning, Phocion's wife, and Panthea. I look into the faces of my jury after they have heard these sublime passages from Shakespeare. Although they have no doubt that the younger Goethe should have been excluded, they have some doubt whether it would not be injustice to exclude this older and final Goethe. What did he teach in his age? Goethe's sun rose behind murky vapours, which steamed upward and spread over central Europe from many a French morass in the fashions of court life. Far on through his forenoon these vapours clung to his chariot. But when in his advanced life Goethe neared the western horizon, and came to his last farewell, he hung there, like the broad trembling sun over the western pines, almost cloudless. He suffered much. That trembling light of the great disk, near its adieu, is to me quite as impressive as anything that burst down upon us from out of the

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period of Werther, or out of the Italian journey, streaked through and through, as I suppose, with infamy. Goethe came to the battle of Jena, and married the woman whose child he had left in Herder's care before his marriage. From the battle of Jena on, Goethe tried to do his best socially. Whatever he did, certainly he taught high things. I hold in my hand his latest German words, and wish I had time to cite something adequate concerning Natalia and the Fair Saint, and the Three Reverences, and the style of education which Natalia approved.

Riding from our metropolitan city through the Highlands of the Hudson, I opened Goethe's chapter on the "Confessions of a Fair Saint." \* The river gleamed, the Palisades looked down on me, the great historic heights of West Point flashed out in the noon upon the page I was studying. I found the current of the river in the book more entrancing than that of the river outside my swift window. I did not care to see Storm King or any other height, for I was passing in "The Confessions of the Fair Saint," for perhaps the twentieth time in my reading, over Goethe's descriptions of those ranges of experience which he thought representative of the innermost in the Christian life. Say Goethe wrote that chapter as an experiment. Nevertheless the Fair Saint is one of his ideals. There is an ideal female character delineated in detail on the canvas of modern literature, and it includes, as its loftiest virtue, affectionate self-surrender to the moral law, or to what Goethe does not call, after Matthew Arnold's style, "an Invisible Somewhat," but an Invisible Friend—that is, a Someone. Goethe represents this woman as surrounded by all the temptations of fashion, and as moved by them, indeed; but as coming little by little into such communion with the Invisible that she reached those loftier regions of spiritual delight from which what Sardanapalus calls pleasure was seen to be unsatisfactory. When once we have tasted the fruits of the upper Paradise, the lower becomes ashes to our lips; or, at least, they are insipid until they are mingled with those upper fruits. To change the metaphor, when once we have ascertained how glorious the sunset clouds, if irradiated by the light of the sun, can be, we shall understand, as never before, that without the light they are only fog. Without lofty affection, without the inspiration of a pure light, whatever Sardanapalus most values is not the gate of the west irradiated by the sunlight and made the very entrance to Heaven. It is vapour of the damp, dark sort, and attractive neither to man nor animal. Make it your business, as I

\* *Wilhelm Meister's Apprenticeship*, book vi.

am obliged to make it mine, to listen to the subterranean sounds in American cities and in some of the higher circles even of our metropolitan civilisation, and you will be forced to conclude that there are few topics more needing to be discussed than the relations of science to social law. Goethe represents his Fair Saint as ascertaining early the difference between the light and the fog. He lifts her character slowly into the light, until her experience becomes a type of lofty religious culture in woman. The question is discussed in Goethe's account of this Fair Saint what faith is, and Goethe, in his old age, gives as a definition very nearly what most scholars here would approve. You say he did not mean all this. You say the account of the Fair Saint was only a sketch of Fancy. Well, it is there on Goethe's canvas as one of the ideals of literature as to excellence in woman. There is nothing as high in Shakespeare.

Turn on out of *Meister's Apprenticeship* into *Meister's Travels*, and enter that land where Three Reverences were taught. You remember that Wilhelm, giving an account of his experience in that country to Natalia, says the children, when he first saw them, greeted him with three kinds of gestures. One set of children looked into the sky with a cheerful gaze and laid their arms crosswise over their breasts. Another set looked upon the earth around them and had a glad look. The eldest stood with a frank and spirited air, their arms stretched down, and peered into what was below them. He asked for an explanation of these gestures, and was told that looking into the sky meant reverence for what is above us; looking about upon the world meant reverence for what is around us; and that the gesture towards the centre of the earth means reverence for what is below us. Reverence for what is above us—this is the ethnic religion. Reverence for what is around us—this is philosophy. Reverence for what is below us, or for the unfortunate, for whatever needs lifting up, for whatever deserves pity—that is Christianity or the Worship of Sorrow. Deep are these symbols; and so Carlyle, recommending Goethe's "*Wilhelm Meister*" as the book which best unravels the problems of modern religious discussion, has his eye always upon the symbols of the Three Reverences. True religion, as Goethe here teaches, is a union of all these reverences for what is above us, what is around us, and what is below us.

Wilhelm is taken into a symbolical palace; and there he finds the religion of reverence for what is above us symbolized by delineations founded on the Sacred Books of the Israelites. The events of the New Testament are pictured in another gallery, and represent the Philosophical Religion, or reverence for what is around us. But, as



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Wilhelm moves along the corridors, he comes suddenly to a closed door. "What is beyond?" "All that is in and beyond the Crucifixion," is the reply. "But you will not admit me to that?" "No. We hold it an accursed familiarity with sacred things to take men before they are adequately instructed into the third corridor, which represents reverence for what is beneath us. This is the Sanctuary of Sorrow." Goethe then in symbolical language speaks of One who "in nowise conceals his Divine origin, dares to equal himself with God, and to declare that he himself is God." His opinion stands summarized in the famous sentence which Carlyle has adopted as his own and to which he has given great prominence in literature—that "the Christian religion, having once appeared, cannot again vanish; having once assumed its Divine shape, can be subject to no dissolution."\*

That is the sun near its last adieu. Will you admit *this* Goethe to Pliny's villa? Will you admit *this* Goethe, Panthea? Will you admit *this* Goethe, Phocion's wife? Will you admit *this* Goethe, Pliny? There is no objection; and Goethe, in his age, has a place in Pliny's villa.

11. In the best literature of the present generation, especially Mrs. Browning and Tennyson, the ideals of Shakespeare and Goethe are yet further emphasized and heightened.

12. The permanent place which woman has won in modern literature is an assurance that these ideals will not be lost out of the world.

13. The place she is winning for her educational, industrial, and political rights is an assurance of the same kind.

Do you fear that when you give woman large political rights divorces will increase in number? Possibly they may. Even if this occurs, it is likely to be only a temporary effect. I have caused the records of Massachusetts to be looked over for fifty years, and I do find that as woman's general rights have been increased in this commonwealth divorces have increased. Probably this is only an *ex post facto* effect. When by-and-by woman has more power to choose her own position in life, when by-and-by she attains capacity to support herself, perhaps there will be fewer marriages of convenience and hypocrisy. Then there will be fewer divorces. Ultimately, therefore, the widening of woman's rights, within reasonable ranges, may diminish, instead of increasing, the clamour for lax divorce laws. Let us make a broad distinction between woman's industrial, educational,

\* Goethe, *Meister's Wanderjahre*, *Zwölftes Buch, Erstes Kapitel*. See Carlyle's Translation, *Collected Works*, vol. xxxii. p. 223. Also especially Carlyle's "Essay on Goethe," *Works*, vol. vi. p. 283.

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and political rights. I believe all the scholarship of the world is agreed that woman should have what she calls her educational and industrial rights. Let her be educated; let her be paid as much as man for the same work. And when her educational and industrial rights have been given her, let her political rights be determined by fair discussion. Let woman's rights come to her not by revolution, but by evolution.

14. But, as ideals of womanly excellence and of marriage have risen, the practical observance of those ideals have risen and is likely to rise.

15. It is Hegel's explanation of the philosophy of history that the ideals of the race slowly become realities in custom and law.

Why do we have a revolution every now and then? Because we know better than previously how to manage human affairs. We reach by discussion and reflection a higher ideal, and then comes clamour for the crystallization of the ideal into social order and public law.

This, surely, is the central inquiry, and one that science, strictly so called, has a right to raise, face to face with these records of an increasingly high ideal of woman's excellence.

16. Where is there room for woman's whole nature, as represented by the ideals of the best literature of the last 500 years? What arrangements of social custom and law will fit these ideals? Where is there room for Portia and Imogen and the whole height of Shakespeare's ideals of excellence in woman? Where is there room for Natalia and the Fair Saint and all Goethe's ideals as to woman's excellence? Where is there room for Mrs. Browning's Aurora Leigh?

17. Not in any palace of Sardanapalus.

18. Not in a free-fancier's contract.

Let the man who fancies marriage under a free contract of separation; let the crawling adder who hisses in the slime of the pits of dissipation, and thinks, as he never comes out to the light of day, that the whole globe is only an adder's nest; let all who have been charmed by the hiss of such an adder come forth and gaze into the face of Goethe's Natalia, into the face of Shakespeare's Juliet, into the face of woman's excellence as delineated by the best literature of the last 500 years. Is there room in your adder-hole for these women? That is the central question of science, after all. Let me show you what literature proves woman's nature to be. In the name of social science, I have a right to ask: Where is there room for woman's whole nature? In no palace of Sardanapalus is there room for Panthea. In no free-fancier's contract is there room for Phocion's wife. In no adder-hole is there room for Goethe's Natalia

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and Shakespeare's Portia and Mrs. Browning's Aurora Leigh. Do you say that these are modern ideals and the result of a little stress put into social law by Christianity? There has not been a sufficiently long test of Christian ideals, you affirm, to make it sure that they are natural. Go back to Hector and Andromache if you must have older literature than any I have cited. Really, there is not room in your adder-hole for Andromache.

Go back, if you will, to Plato's Symposium, which is sometimes attacked for its low ideal of woman. Understand the production, and then ask where there is room for the ideal of womanly excellence there depicted. I have stood on the Cathedral of Milan and gazed at Mont Blanc. Around me were the humble shops of the Italians, and from among them rose this pyramid of carved marble. Just so, out of the rude talk of Alcibiades and the foolish chatter of frivolous guests, rose in the Symposium of Plato the form of Socrates. When you have studied the Symposium, you come out of it as one comes from the summit of Milan Cathedral. If you have understood the words of Socrates in the Symposium, you have heard the bells ring in presence of the Alps and have been on the turret nearest the sky. The contrast between this turret and the foolish chattering around the base of the cathedral is the striking trait in the plan of the temple we call the Symposium. Socrates, however, is not the loftiest character. He stands as the pupil of a woman, a certain Diotima of Mantinea, who taught him the true doctrine concerning love. "When a man loves anything" asked Socrates, "what does he love—something which he has, or something which he has not?" "Something which he has not." Question succeeds question, and finally the answer given to the inquiry, what love is, affirms that love is the "desire of the eternal possession of the good." Little by little the range of thought is lifted, until Socrates tells the astonished audience what Diotima, in her final discourses, taught him. This is the loftiest idea of Plato's philosophy. I repel with indignation all attempts to accuse Plato of teaching low ideals in this great production. He means to shame them by contrasting Socrates with the lower natures around him. Undoubtedly he does not reprimand, as we should, some of the unspeakable vices of the Greeks. It is amazing that Plato did not feel that they ought not to have been discussed. Finally, Diotima tells Socrates that this is the secret of love: First, we are to love one beautiful form, then many beautiful forms, then all beautiful forms. Then, from a love of beautiful forms, we are to rise to the love of beautiful practices. One fair form, two fair forms, many fair forms, all fair forms, we are to love; and then from fair

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forms we are to rise to the love of fair practices ; and from the love of fair practices to the love of fair ideas ; and from the love of fair ideas to the love of him who thinks them ; and from that into friendship with God. That is love. That is woman's idea of love, as presented by Plato and by Socrates.

" All things transitory  
But as symbols are sent ;  
Earth's insufficiency  
Here grows to Event ;  
The indescribable  
Here it is done,  
The Ever-womanly leadeth us  
Upward and on."

So Goethe sings at the conclusion of Faust, and the words well fit the lips of science face to face with Diotima's philosophy. Let Tennyson express his own hope of the future. You will find it high, but not so high as Plato's.

" The woman's cause is man's : they rise or sink  
Together, dwarfed or godlike, bond or free,  
If she be small, slight-natured, miserable,  
How shall men grow ? But work no more alone !  
Let man be more of woman, she of man ;  
He gain in sweetness and in moral height,  
Nor lose the wrestling thews that throw the world ;  
She mental breadth, nor fail in childward care,  
Nor lose the childlike in the larger mind ;  
Till at the last she set herself to man,  
Like perfect music unto noble words ;  
And so these twain, upon the skirts of Time,  
Sit side-by side, full-summed in all their powers,  
Dispensing harvests, sowing the To-be,  
Self-reverent each and reverencing each,  
Distinct in individualities,  
But like each other, even as those who love.  
Then comes the statelier Eden back to men :  
Then reign the world's great brides, chaste and calm ;  
Then springs the crowning race of human kind.  
May these things be ! "

—Tennyson, *The Princess*.

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### PRELUDE.—VIRCHOW ON EVOLUTION.

AT the fiftieth anniversary of the German Association of Naturalists and Physicians, at Munich, Professor Virchow, of Berlin University, replied to Ernst Haeckel's latest defence of Materialism. An authorized copy of Virchow's celebrated address on this occasion has been translated in England, published by Murray, corrected by Virchow himself, and has just reached this country. Germany has discussed the collision of Virchow and Haeckel. England begins to discuss it. But the long lash of criticism which Virchow is winding in steady blows about the diminutive limbs of the small philosophers of advanced Darwinism has yet received far less attention than it deserves in America.

I propose to show to-day that it is a lash which really means business, and within its present range is not likely soon to cease to be wielded. *The Popular Science Monthly* has, indeed, published an imperfect report of this great address; but it has failed, as has also Asa Gray, of Cambridge (in an article in *The Independent*), to bring out the breadth of the collision between Virchow and Haeckel. The latter represents what is called advanced Darwinism, or Monism, or materialistic as opposed to theistic views of evolution. Virchow, although holding to one form of the development theory, is so conservative as to affirm that no one has the right to teach that man is derived from the ape or any other animal. He affirms that the central tenet of Darwinism is as yet only an hypothesis, and that all who teach it as an established fact are going far beyond the permission of the scientific method. My purpose now is to give emphasis to the collision between Haeckel and Virchow, or to the conflict between materialistic and theistic forms of the evolution philosophy. Haeckel, in the first and second sessions of this Fiftieth Conference of the German Naturalists, maintained a large number of his characteristic propositions in an address which I may summarize fairly by these statements:

1. The Biblical account of the planet's creation has been demolished by geology.
2. The two principles of inheritance and adaptation explain the derivation of the manifold existing organisms from a single cell.
3. Were any further argument needed to disprove supernatural intervention, we have only to notice the frequent occurrence of undeveloped and useless organs in many types of the animal world.
4. Perception and will are possessed by primary organisms, consisting of but a single cell.

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5. The cell consists of matter called protoplasm, composed chiefly of carbon, with an admixture of hydrogen, oxygen, nitrogen, and sulphur.

6. These elements, probably united, constitute the body and soul of the animal, and, suitably nursed, become man.

7. In this way the Creator is disposed of, the mystery of the universe explained by the mechanical theory of life, the Divinity annulled, and a new era of infinite knowledge ushered in.

8. These views should be taught in every school in the land.\*

This is the revolutionary form in which the materialistic or Hæckelian school of evolutionists presents its conclusions to Germany. These are the views which Virchow calls "wilful and despotic." These are the propositions against which Virchow, in presence of the German naturalists, lifted up his emphatic protest—one likely to be long remembered, for it is now proved to have behind it the support of the best science of Germany. As Virchow himself says, in his preface to the English edition of his speech: "With a few individual exceptions, this protest has met with cordial assent from German naturalists. They feel themselves set free again from the tyranny of dogmatism."

But now, over against these propositions of Hæckel's, what are the central propositions of Virchow? I do not follow his order of statement; but, of course, you will expect me to give exactly his language:

1. "As a matter of fact, we must positively recognize that there exists as yet a sharp line of demarcation between man and the ape. We cannot teach, we cannot pronounce it to be a conquest of science that man descends from the ape or from any other animal."

2. "As recently as ten years ago, whenever a skull was found in a peat-bog, or in pile-dwellings, or in ancient caves, people fancied they saw in it a wonderful token of an inferior state, still quite undeveloped. They smelt out the very scent of the ape; only this has continually been more and more lost. The old troglodytes, pile-villagers, and bog-people prove to be quite a respectable society. They have heads so large that many a living person would be only too happy to possess such."

3. "There is something soothing in being able to say that the group of atoms, Carbon & Company (this phrase is, perhaps, rather too brief, but still correct, inasmuch as carbon is probably the essential element)—that this firm of Carbon & Co. has at some time or other dissolved partnership from the common carbon, and founded, under special conditions, the first platitude, and that they still continue to establish new branch companies. But, in opposition to this, it must be emphatically stated that all really scientific knowledge respecting the beginning of life has followed a course exactly contrary."

4. "Whoever will have a formula—whoever says 'I have absolute need of a formula. I must make all clear to myself. I am resolved to have a con-

\* See article in *Quarterly Review* for January, 1878, on "The Use and Abuse of Scientific Lectures," and also the *London Times* of November 30th, 1877, on "Darwinism in Germany."

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sistent view of the universe'—he must assume either a *generatio æquivoca* or creation. There remains for him nothing else. If we would speak frankly we must admit that naturalists may well have some little sympathy for the *generatio æquivoca*. If it were capable of proof, it would, indeed, be beautiful. But we must acknowledge it has not yet been proved."

5. "I have no objection to your saying that atoms of carbon also possess mind, or that in their connection with the plastidule company they acquire mind; only I do not know how I am to perceive this. It is a mere plaything with words. If I explain attraction and repulsion as exhibitions of mind, as psychical phenomena, I simply throw the Psyche out of the window, and the Psyche ceases to be Psyche."

6. "I have all along laid stress upon this: That we should not seek, in the first place, the transition of the inorganic into the organic; but, rather, first fix the contrast between the inorganic and the organic and direct our studies to this contrast. So do I also maintain that this is the only way of progress. And I have the firmest conviction that we shall make no advance unless we fix the province of mental processes at those limits within which mental phenomena actually present themselves to us, and unless we refrain from supposing mental phenomena where they may, indeed, possibly take place, but where we perceive no visible, audible, tangible, in a word, no sensible phenomena which could be designated as intellectual."

7. "So long as no one can define for me the properties of carbon, hydrogen, oxygen, and nitrogen in such a way that I can conceive how from the sum of them a soul arises, so long am I unable to admit that we should be at all justified in importing the 'plastidulic soul' into the course of our education or in requiring every educated man to receive it as scientific truth so as to argue from it as a logical premise and to found his whole view of the world upon it. This we really cannot demand. On the contrary, I am of opinion that before we designate such hypotheses as the voice of science—before we say 'This is modern science'—we should first have to conduct a long series of elaborate investigations. We must, therefore, say to the teachers in schools: 'Do not teach it.' We must draw a strict distinction between what we wish to teach and what we wish to search for."

8. "Whoever recalls to mind the lamentable failure of all the attempts made recently to discover a decided support for the *generatio æquivoca* in the lower forms of transition from the inorganic to the organic world, will feel it doubly serious to demand that this theory, so utterly discredited, should be in any way accepted as the basis of all our views of life. I may assume that the history of the *Bathybius* is pretty well known to all educated persons; and with the *Bathybius* the hope has once more subsided that the *generatio æquivoca* may be capable of proof."

*Bathybius* is spoken of as slightly by Virchow as it has been on this platform. It was my fortune two years ago to recite here the history of the downfall of Huxley's and Hæckel's *Bathybius*.\*

It is affirmed by the useful but crudely edited *Popular Science Monthly*

\* *Biology*, Lectures I. and II.

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that Hückel has defended successfully the theory he puts forth as to this alleged life in bioplasmic matter at the bottom of the sea. Virchow does not agree with this American authority. He speaks as seriously of the problem of the origin of life as does Lionel Beale or Heinrich Frey or Hermann Lotze. The central character of Hückel's and Huxley's mistake as to the Bathybius is being shown in the course of this discussion. Strauss's admission that miracle must have occurred once, at least, at the introduction of life, unless spontaneous generation has occurred, proceeds upon principles to which Virchow's views add commanding emphasis.

Thus far extends the collision between Virchow and Hückel. But allow me to close this too rapid summary of German news by showing you the collision between the highest authorities on philosophy and Virchow. This famous professor of Berlin is a naturalist. He concedes too much in his attack upon Hückel. He affirms by implication that, if spontaneous generation is ever proved, Hückel will be shown to have been right in saying that a Creator is not necessary to the explanation of the universe. I hold in my hand here the best philosophical magazine in the world—*Die Zeitschrift für Philosophie*, edited by Fichte, Ulrichi, and Wirth; and published at Halle. In it I find Virchow's address discussed at length; but the position is taken, as it has been again and again on this platform, that, even if you prove spontaneous generation, you do not disprove the need of a Creator. Behind spontaneous generation there are curious affinities, chemical properties, and the ultimate constitution of matter. But the question still arises: Where did these properties originate? This philosophical journal (p. 123, first number for 1878) affirms, with justice: "Were the organic derived from the inorganic and the mental from the organic, the question would always remain: Whence the Inorganic?" Affinities of matter explain all. Whence come the affinities? This philosophic magazine gives you the right presentation of Virchow's propositions. He opposes materialism with entire success; but he defends theism with a slight unskilfulness. He does not see that atheism can be answered even if spontaneous generation be proved. But, putting together all the German views, the result of the outlook all along the Rhine, the Elbe, and the Oder is, that there is not a little fog on the Thames.

Virchow, in one of the learned Quarterlies he edits, has lately attacked the extravagances of advanced Darwinians more vigorously even than in the Munich address. He affirms that Hückel follows Lamarck more than Darwin. He styles the circles of materialistic evolutionists "bubble companies." Language like this from perhaps the foremost chemist on the globe is a sign of the times.

So far as I care to draw personal support from this news, I have a right to affirm that Hückel has been attacked here, as every one knows, and for precisely the things for which Virchow now attacks him. But, for attacking Hückel and for opposing materialistic views of evolution, I have been attacked from end to end of the land by Spencerians and materialistic evolutionists, and Darwinians advanced further than Darwin himself, although my propositions were entirely parallel with those now



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put forward by Virchow. The speech of the Berlin professor is, if you please, called timely and judicious at last by a learned professor of Harvard yonder, who was slow to recognize the soundness of similar opinions when, two years ago, they were defended here.

### THE LECTURE.

CONFUCIUS taught the Chinese to call a child a year old on the day of its birth. Plato represents every human being as standing in a winged chariot and driving a black and a white horse (Phædrus). The white is the symbol of the moral emotions in their just supremacy: the black is animal passion. The charioteer has conscience and reason as right and left hands, which grasp the reins of the bitted steeds. The immortals, Plato says, drive white horses. All mortals were once in their train; but, for reasons known to the Supreme Powers, human souls sank into their present low estate and now have much trouble with their ill-matched coursers. These steeds, according to Plato, come from the pastures of the Unseen, over which the animals roamed before man's birth. Especially does the black horse love to feed in that dark region which lies between this life and the invisible world on the side of birth. He comes from the nebulous quarter where the soul first dips into matter. The white horse is from the loftier pastures. He is from the celestial region. The problem of life is how to drive the two abreast and up the slope of the azure. Now, while I am, of course, not here to defend Plato's theory of the pre-existence of souls, I am here, face to face with the magnificent exhibition with which you have been favoured, to defend the scientific idea of the pre-existence of bodies. You have seen the white horse and the black; you have seen the chariot wheels of life; you know what disease can do for the innermost ingredients of the blood; and now, having had the white courser and the dark put before you, the chariot of life behind the two, why will you not allow me, in spite of all the sensitiveness of delicacy, to deal as frankly as these photographs have done with certain unspeakabilities of hereditary descent?

1. Minute alterations in the blood determine minute alterations in local nutrition.\*

Every one has noticed in the stereopticon illustrations of this lecture that the blood consists of three different elements—a multitude of red discs, a much smaller number of white corpuscles, and a fluid which when in the veins we call plasma, and which we call the serum after coagulation has set in, on the blood being removed from

\* Carpenter's *Physiology*, Eighth Ed., section 726.

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the body. But for my purpose it is necessary to look a little more narrowly into the composition of this mysterious current of the circulating fluid. In the blood of the healthful man the normal range of variation for the principal constituents is as follows:

Fibrin.....	2 to 3½ parts per 1,000
Red corpuscles .....	110 " 152 " "
Solids of Serum.....	72 " 88 " "
Water .....	760 " 815 " "

Within the limit of these variations, health, according to Dr. Carpenter, may be preserved; but if you produce wider variations either way, if you change the proportion of these ingredients, if you cause a deterioration of the quality in any one of these elements, disease is the result. Here is a most delicately balanced machine. This chariot of Plato is wheeled, and you cannot injure one of its wheels without injuring the opposite one. You cannot break one of the fastenings by which the coursers are attached to the chariot without giving increased wildness to the coursers. You cannot injure any part of their harness without imperilling the whole, for no strap is stronger than its weakest part. Thus it results that minute alterations in the blood may produce extraordinary changes in the whole system.

The effect of morbid alterations in the blood has been so brilliantly illustrated before you by the eloquent, original photographs of Dr. Cutter and Dr. Harriman, to whom we are so greatly indebted to-day, that I need take no time in reciting the facts of research. Allow me to say, however, that small, moving, thread-like bodies have been observed by Obermeyer in the blood of patients suffering from fever, shortly before or during the crisis.\* Their nature is unknown.

In the blood of patients afflicted with the cholera Nedvetski has seen exceedingly minute, rod-like bodies, and also moving particles, apparently derived from the white corpuscles.† Nepveu has noticed in the blood of those afflicted with erysipelas similar minute rod-like bodies. Riess has noticed bright granules in the blood in scarlet fever.‡ There have been observed, also, small, round, black bodies in the blood in puerperal fever, and similar forms in diphtheritis.

Great interest centres in the theories regarding the morbid alterations of the blood. Dr. Carpenter, an authority which I have before me, says that a considerable importance attaches to the statement made by Lostdorfer, and confirmed by the great histologist, Stricker, that the blood of patients suffering from the nameless disease (to use a most delicate but awful phrase by which it is commonly designated)

\* *Centralblatt*, 1873, p. 145.

† *Ibid.* 1872, p. 234.

‡ Reichert's, *Archiv.*, 1872, p. 237.

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can be recognized by the presence of small, bright bodies, which present various forms of movement, and in the course of a week after removal from the body enlarge, sprout, become marked with pits, and die. Lostdorfer's statements have been corroborated by Biesiadecki.\* Halford has proved that there are peculiar nucleated cells in the blood after snake-bite, and he believes these are derived from germinal matter in the poison of the snake and have grown at the expense of the blood. You stand hushed before the recital of these searching recent conclusions of exact investigation, because at last you have fastened your attention on the Holy of Holies, to which an outgrown book, as some call it (the Bible), called your attention three thousand years ago. "The blood is the life."

2. Minute alterations in the blood—that is, in the quality or quantity of its several ingredients—are produced by many physical causes.†

3. They may be produced also by purely mental causes.‡

4. The white blood corpuscles are peculiarly sensitive to both physical and mental influences.

5. At an early period of development, before the heart and lungs are fully formed, the circulating fluid contains only white blood corpuscles.§

Had I time to put before you, under the microscope, the tissues figured in the great work of Lionel Beale on *Disease Germs*, the volume of which I now hold in my hand, you would see that all the corpuscles in the young tissues when the heart and lungs are not yet fully formed take the carmine stain. This shows that they are made up of the germinal matter, or bioplasm, discussed here at such length previously. It is a very striking fact, the proof of which we owe in large part to Lionel Beale, that in the early stage of life the young blood contains only white corpuscles. These are more sensitive than any other part of the body to the changes produced by mental and physical impressions.

6. Hence, physical and mental causes may exert powerful modifying influences at this stage of the life of animals, not excepting man.

There is a mother at a window. Suddenly she sees at another window the sash fall upon the fingers of her own infant. Three fingers drop. Three stumps are left. They bleed before her eyes. She cannot assist the child. I am telling a story out of Dr. Carpenter|| and not out of the newspapers. A surgeon is called in. He attends

\* See Carpenter, *Physiology*, note to section 204.

† *Ibid.*, sections 203, 204.

‡ *Ibid.*, sections 721-726.

§ Beale, *Disease Germs*, p. 104.

|| *Physiology*, sec. 724.

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to the infant; binds up its wounds; and then turns to the mother, who sits moaning and complaining of a pain in her fingers. Within twenty-four hours three of her fingers, corresponding to those cut off from the hand of the infant, begin to swell, become inflamed, and need to be lanced. They go through the whole process of wounds, although perfectly unhurt except by imagination. Are we fearfully and wonderfully made? But that infant was further off from the mother than it once was.

Here is a carpenter in a peasant's house. He is set upon by a soldier. I tell this story out of Von Ammon.\* The mother's babe lies in the cradle playing during the fight. It understands nothing of the *fracas*; laughs, crows, while its father is in the peril of death. The mother at first stands petrified with terror. At last she rushes between the combatants; seizes the sword of the soldier; breaks it in pieces across her knee. The neighbours rush in, take the soldier into custody, and the mother, in her excitement, snatches up her healthful child and gives it natural food. In five minutes the child dies of poison, although previously perfectly well. What originated the poison?

The blood-discs change. The secreted food of the infant becomes poison under temporary and purely mental forces.

God knows how the immaterial part of us dominates over the flesh, has lordship over matter; can cut into fingers; can transmute, as Lady Macbeth once invoked the evil spirits to do, the sweetness of the natural food of the child into poison. This is not imagination, but established science. It is a cool statement of what, under the influence of powerful emotion, may happen to the natural food of the infant. But that child once was more in danger of being poisoned than it was when in its cradle.

Unspeakable thoughts rise here; but we are in Pliny's villa, Nay, we are on the heights of the Apennines, with Michael Angelo and Goethe, who have walked forth together from the villa to look on the earth and sky; and the thoughts I have raised in your minds they dare to continue to discuss in frank conversation with each other. Panthea, Phocion's wife, Cornelia are discussing the same topic in one of the chambers of the villa; but Goethe little suspects that their thoughts are as serious and incisive as his. We will listen to the conversation of this poet and this sculptor. There is an east wind resounding in the grove. A serene, solemn anthem fills the temple of the Apennine forest. It dies away to sacred silence now; and we

\* *Die Ersten Mutterpflichten und die Erste Kindespflege*; see also Carpenter, sec. 723.

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hear Goethe saying, as he paces to and fro with Angelo among the purple trunks and on the brown sheddings of the pines: "Well-authenticated cases are on record in which the natural food of an infant has been rendered poisonous by the effect of fear, anger, or other violent and painful emotion on the part of the mother."

Michael Angelo says: "You must not tell that to the world." "Why not?" asks this poet, who was also a man of science.

7. Hideous physical impressions on the mother are capable of producing deformity and monstrosity in the offspring. The keen sensitiveness of the mother to such impressions is a teaching of ancient, as well as of modern times.

8. It seems to have been forgotten that the converse is equally true, or that this sensitiveness is equal to the creation of symmetry and beauty.

"You must not tell that to the world," says Angelo. "You may prepare the ages little by little for these topics; but you must not speak too frankly at once." Goethe replies, the pine groves sounding over him again, the ocean waves of the Mediterranean flashing in the distance to the west and the Adriatic in the east: "Why should not the morning rise on our suffering centuries? Why have we not the right, looking down upon Plato's Academy in Greece, and upon that land in which it was taught that the blood is the life, and that to the third and fourth generations God visits the sins of the fathers upon the children"—and here Goethe's voice rises to the solemnity of the winds in the pines—"why have we not the right to spread abroad the knowledge of whatever God has made important?"

9. Strong and persistent evil passions exercised in certain circumstances by the mother reproduce themselves in the constitutional and unchangeable tendencies of offspring.

10. The converse is equally true.

11. It follows that a child may be worse than its mother.

12. It follows also that a child may be better.

13. The qualities actively exercised by the mother, rather than those possessed, are those which descend to offspring by the laws of heredity.

14. These facts of biology make possible a large improvement of individuals through variation of character induced by inherited educational forces.

Goethe and Michael Angelo pace to and fro and converse concerning the operation of these laws. While they are thus entering the heart of Nature, in their grove on the Apennine heights, Cornelia, Phocion's wife, and Panthea in the marble corridors of the villa

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yonder walk alone, discussing these same problems. "There was," Goethe says to Angelo, "in our modern time a Flaxman, a boy who loved the forms that you have represented in marble. And I have heard that his mother loved similar works of art and occupied herself for months in the study of them; and that she was surprised to find her moods reproduced in the organic constitution of her child." "I have read," says Goethe, "of a Kingsley, whose mother loved the scenery of one part of green England, and who was so fascinated by the outlook at her home that she made herself an artist in putting upon canvas the outlines of the hills—threw herself into communion with Nature, and I am told," continues this poet, "that Charles Kingsley had throughout life as an organic permanent passion that which was a temporary passion with his mother."

"These are fearful facts," says Angelo; "but can you prove that these laws operate in men of coarser organizations? Do they rule in the lower ranks of society? Can they lift," asks Angelo, kindling, "the lowest into something noble? Can there be such an improvement in individuals that from the angular and coarse may rise the symmetrical and refined?" "Listen," says Goethe, "and let me imitate the speech of the poor. I have heard of an Irish mother who had a malicious child and a kind child. She was asked to account for the difference of disposition between the two. 'I know nothing of the cause,' she said; 'only this little Kate will strike her knife into the shoulder of my little Mary. I know nothing of the cause. The good God gave me both of them. How should I know the source of her disposition? Look into her brown eyes. There is a leer of malice in them.'"

Goethe says he studied this case; and finally the poor Irish woman explained it, unconsciously. He asked her a question: "Were you happy in the summer and winter and spring before this child's first summer?" "Happy is it you say, sir? An' shure, when me husband was tuk up wid another woman, how could I be happy? An' he a-spending his money on her, too, an' the wages got lower. An' it's not the money that riled me, neither. It's me as was but a few months married, an' in a strange counthrie; and he a-riding more nor three times wid her in a chaise, it is. Och! but he'd been over and larnt the wicked ways before iver he brought me here. Faith, me heart was broken, it was; 'an I hated that woman so I was longing all the time to lay me hands on her. I'd liked to have murdered the old fiend. An' I wanted to go to the factory an' inform on her; but me husband cursed me, an' threatened to kill me, if I did." "Pardon this rude language of the poor," Goethe says to Angelo,

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who loves the soft Italian speech. "And was he still behaving so badly in the summer before Mary's first summer?" Goethe asked her. "The saints be praised, no. The woman moved away. Bad 'cess to her! An' Patrick gave up his bad ways afther; and trated me rale well, too. The baste of a woman niver came back, an' I tuk no more throuble consarnin' her."

Children are mysteries, it is said; but this is not Goethe's opinion.

Angelo smiles, and looks with a soft pensiveness at both the Adriatic and the Mediterranean, and asks Goethe if this is not an exception case, or if he has other facts like these. "Why," answers Goethe, "I knew a family of coarse and thoroughly commonplace people; but there was in it a single daughter about nineteen years old, who was so evidently and remarkably superior, both in personal appearance and nature, that it did not seem possible she could belong to the same family. There was no explanation of her differing from her brothers and sisters, and I thought the mystery was one impossible to solve. Conversing with her mother, she said: 'No, this girl was not born in that low dwelling under the shadow of the catalpas; but in a poorer shed in Northern Tennessee. We were very poor about those times, and there was no look out for anything better. Some of the boys had come up here to see if they could not get better land. But we had no money to buy it with, if there was. There was a book I must tell you about—a book that lifted me right out of myself. There came along a peddler ('twas a wonder how he ever got to such an out-of-the-way place). Well, he unpacked his traps; and among them was a little book, with a lovely green-and-gold cover. 'Twas the sweetest little thing you ever saw, and there was just the nicest picture in the front. I saw it was poetry. And on the first page it said, *The Lady of the Lake*. That was all. I *did* want that book. And I had a couple of dollars in a stocking-foot on the chimney-shelf. But a dollar was a big thing then, and I did not feel as if I ought to indulge myself. So I said no, and saw him pack up his things and travel. Then I could think of nothing but that book the rest of the day, I wanted it so; and at night I could not sleep for thinking of it. At last I got up, and, without a bit of noise, dressed myself and walked four miles to a village where the peddler told me he should stay that night, at the Browns'. Friends of ours they were. And I got him up, and bought the book, and brought it back with me, just as contented and satisfied as you can believe. I looked it over and through, put it under my pillow, and slept soundly till morning. The next day I began to read the beautiful story. Every page took that hold of me that I forgot all about the pretty cover. And perhaps

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you would not believe it, but before Nelly arrived in the world, if you would but give me a word here and there, I could begin at the beginning and say it clear through to the end. *It appeared to me I was there with those people by the lakes in the mountains—with Allan-bane and his harp, Ellen Douglas, Malcolm Graeme, Fitz-James, and the others.* I saw Ellen's picture before me when I was milking the cow, or cooking on the hearth, or weeding the little garden. There she was, stepping about so sweetly in the rhyme, that I felt it to be all true as the day—more true after I could repeat it to myself. And then, when I found the baby grew into such a pretty girl, and so smart too, it seemed as if Providence had been ever so good to me again. But children are mysteries, anyway. I have wondered a thousand times why Nelly was such a lady, and why she loved to learn so much more than the other children." \*

Children are mysteries! Michael Angelo and Goethe are plainly not of that opinion. You say that I must not rest this case upon anecdote. But I would ask: On what shall I rest it, if it be not on scientific, ascertained fact? Let Professor Dalton be cited here by Goethe, on the Apennine height, under the solemn pines. This professor, than whom there is no more conservative, sound American teacher of scientific fact, utterly divorced from theory, states that the wife of the janitor of the College of Physicians and Surgeons dreamed that she saw a man who had lost a part of the ear. The dream made a great impression on her mind, and she mentioned it to her husband. A child appeared in the world with a portion of one ear deficient, and the organ was like the defective ear she had seen in her dream. When Professor Dalton was lecturing on these topics, the janitor called his attention to this instance. The ear, says Professor Dalton, looks exactly as if a portion had been cut off by a sharp knife.

The superiority of mind to matter! How the immaterial portion of us dominates the material! And how slowly are we getting rid of the materialism which depends on matter more than on soul for beauty. There is no beauty except in this white horse that comes down from the heavenly pastures. There is no safe driving except in the perfect matching of the white horse and the black.

I find here Professor Lewis, of Bellevue Hospital, making some most astounding assertions. I should not believe him were he not a scientific expert. A mother longed to see a watch, and a child arrived

\* This and the previous illustration are adapted from the personal narratives included in the interesting work of Mrs. G. B. Kirby, New York, 1877, on *Transmission, or Variation of Character*, etc.



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in the world with the figures that belonged on the dial of the watch formed on the white of its eyeball. Professor Dalton affirms, in language before me,\* that there can no longer be any serious doubt "that various deformities and deficiencies originate in certain cases from nervous impressions—such as disgust, fear, or anger—experienced by the mother.

The purpose of Goethe, here on this height, is to turn that proposition over into its converse. The purpose of Angelo is to make it clear that, as a child can be worse than its mother, so it may be better. The world has listened long enough to the facts of science as to monstrosities and deformities. Why should we not listen to the possibilities of using this two-edged sword of heredity on the useful side? It has mown down the race; it has opened a wide path for vice through the world; it has given to the centuries their accursed and dolorous traits. Why should not the sword be reversed? Why should the black horse not be made to keep company with the white and the chariot be held to its grooves? The other edge of the sword may clear the way for the happiness of the ages.

Goethe and Angelo walk down the heights to Pliny's villa. They stand in the marble corridors, and their eyes are like stars, for they have listened to the suggestions of every secret of science. Goethe will not allow himself to be as frank in the villa as on the heights. He is amazed to find, however, although little is said, that all there are as well informed as he. Cornelia, no less than Pliny, Panthea, no less than Milton, Mrs. Browning, no less than Michael Angelo, unite in reciting to the four winds and the two seas, to the Mediterranean and the Adriatic, this sonnet:

"O star of morning and of liberty!  
O bringer of the light, whose splendour shines  
Above the darkness of the Apennines,  
Forerunner of the day that is to be!  
The voices of the city and the sea,  
The voices of the mountains and the pines,  
Repeat our song, till the familiar lines  
Are footpaths for the thought *heredity*!  
Its fame is blown abroad from all the heights,  
Through all the nations, and a sound is heard  
As of a mighty wind, and men devout,  
Strangers of Rome and the new proselytes,  
In their own language hear its wondrous word,  
And many are amazed and many doubt."†

\* *Human Physiology.*

† Longfellow.

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### PRELUDE.—THE RESURRECTION BODY.

PROFESSOR TYNDALL, on the Alps, in company with one of his friends, was requested by the latter to tell him what is behind the keyboard of the nerves of man; or, in other words, what causes in the substance of the brain the molecular motions which are supposed to be the basis of thought, choice, and emotion.

Pushed from point to point, and failing to give a satisfactory answer, the author of the Belfast address at last burst out with these incisively frank words: "I view Nature, existence, the universe, as the keyboard of a pianoforte. What came before the bass I don't know and don't care. What comes after the treble I equally little know or care. The keyboard, with its black and white keys, is mine to study." The conversation has been reported to the world (*Scribner's Monthly*) by the student who received this remarkable reply to his inquiries. It illustrates the willingness of certain physical philosophers to limit the field of outlook in researches into mental physiology.

It is conceded that neither electricity, nor magnetism, nor heat, nor any physical force with which we are acquainted, explains what we call the soul. But we are conscious of our existence. We know that, if from the rest of the flesh we dissolve out the nerves as a white ghost, there is something finer than they behind them—namely, the nervous influence. If we dissolve out all the bioplasts and hold them up here, all in their natural positions, there is certainly something finer yet behind them all—namely, the force which co-ordinates them. If we were to take all the bioplasts there are in the body, and hold them up here, the cluster of germinal points would have, in some sense, the human form; but it would not be the finest thing in man. There is an influence behind the bioplasm, a co-ordinating power, arranging the growth of the whole body. I have asked you on a former occasion to take a leaf from the tree *Igdrasil*, and dissolve out the finer from the coarser portions. I have asked you to imagine standing here a skeleton, then next a man made of muscles, another of veins, another of nerves, another of bioplasts. You know that behind the nerves there is a force which you may conceive to be taken out. If it were here in the air, you could not touch it. You could pass your hand through it; you would not feel it; and yet you know it is there. But these nerves themselves were woven by the bioplasts. Take out the bioplasts. Let them retain their co-ordination. There is something behind them—the co-ordinating power. You know such a power is there. Take that co-ordinating power out. Hold it up here. You cannot see it; you cannot touch it; but it is there.

When Professor Tyndall says we must not ask what is behind the keyboard, I find that he is repressing investigation, and, very contrary to his nobility of character, is limiting research. Precisely at the point where he says he does not care what comes before the bass or treble in the mysterious anthem of the molecular motions which are associated with life and thought, I must say that I care; and on this Easter morning I have a double right to say so.

It is an accepted conclusion with Julius Müller that this finest thing of all, or the co-ordinating force which we know exists in the physical organism, is the true body. It has taken on this poor fleshy envelope as a hand puts

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on a glove. What if, by-and-by, it puts on a resurrection body as another glove? Julius Müller, in a passage of great incisiveness in a volume now before me, says: "It is not the *surx*, the mass of earthly material, but the *soma*, the organic whole, to which the Scriptures promise a resurrection. The organism, as the living form which appropriates matter to itself, is the true body, which in its glorification becomes the *soma pneumaticon*. The Scriptures teach that the soul, between death and the resurrection, remains unclothed." \* This is language forty years old, and represents the truly orthodox view of the resurrection.

This is the morning after Easter, and what topic could have greater timeliness or impressiveness than that which is suggested by these three questions:

1. From the point of view of theology, what is the standard orthodox scholarly opinion as to the manner of the resurrection?

2. From the point of view of biology, what is the best opinion as to the same point?

3. Is there any conflict between the two views?

If I am to follow Julius Müller, I must regard the true body and the resurrection body as two things. But they are related to each other much as the true body and the body of flesh now are—that is, as hand and glove. The true body is the organic force which correlates all the parts of the flesh. It assumes here the clothing of the physical tissues. We drop at death all that is corruptible or gross; but the *soma*, the organic whole, as Julius Müller calls the correlating force, continues to exist. In these positions Julius Müller is not denying at all the scriptural assertion that there will be perfect identity between the resurrection body and the body laid down at death. The Scriptures assert that there is sameness between the body which we bury and the body which is to be raised. *They do not teach in what the sameness consists.* Open Professor Hodge, of Princeton,† and you will find him citing Julius Müller's views with approval; but he is careful to say that neither the Church nor the Scripture undertakes to determine in what the sameness consists between the buried and the resurrection body. We must be very careful not to know too much on this topic.

What Julius Müller teaches is, that in the resurrection body the organic principle of the present body clothes itself again. It is unnecessary to go back, with some mediæval teachers, to ask whether any part of the body that is buried is preserved and is used in that glorified clothing. It is not necessary for us to shock ourselves by any long citation of Jerome, in the passage where he says that, unless there be physical bodies, the wicked cannot gnash their teeth in the next life. Neither need we remember that it has been said that cripples rise as cripples, and that those who were variously deformed have the same deformity in the resurrection body. All these mediæval ideas are rejected by scholarly theology. They hardly belonged to a serious popular presentation of this truth even in the dark ages.

The scholarly presentation of the manner of the resurrection asserts sameness between our present body and the resurrection body much in the sense in which it asserts sameness between this present body which I now possess and the body I had when I was five or ten years old. Every particle of that earlier body has been changed; but the organic principle is unchanged. The man who committed forgery twenty years ago is responsible, on account of the identity of his body, for the crime of that

\* *Studien und Kritiken*, 1835. pp. 777, 785.

† *Systematic Theology*, vol. iii, pp. 778, 779.

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date; but you know he has changed every particle in his body since that time. And so, when we lay down the fleshy body at death, we retain the organic principle, which has already assumed several bodies. At the Resurrection Day it will assume a glorified body, of which the capacities, according to Julius Müller, were taught at the transfiguration and in the forty days after the resurrection. There are two definitions of sameness—chemical identity and organic identity. Julius Müller does not assert chemical identity between the present body and the resurrection body. He asserts organic identity. Three things are to be distinguished from each other—the present body of flesh, the present organic principle or spiritual body (if we please to use that phrase), and the resurrection body. Consider these apart from each other, and you will not be confused when you read Ulrici's views of the spiritual body in connection with Julius Müller's views. The organizing principle and the resurrection body are not the same thing, any more than the hand and the glove are the same or any more than the *sarx* and the *soma* are the same.

Julius Müller's teaching is far from being that of Swedenborg. There is nothing in the creeds of the Church against the doctrine of a spiritual body as now existing in us and as an organic principle which will ultimately assume a resurrection body. This is the doctrine which Julius Müller derives from the scriptural assurance that there is a spiritual body and there is a natural body—that is, that now and here we have a natural body, and now and here we have a spiritual body.

Go with Julius Müller to the highest outlook of biological science, and compare his view of the organizing principle in man with the biological view of an invisible force or co-ordinating power behind bioplasm; put with Julius Müller your hand through the spaces which that force may be supposed to occupy; study this co-ordinating power with Ulrici and Lionel Beale and Hermann Lotze; take your biological authorities and confront them with your theological; and I defy any man who understands biological science, on the one hand, and theological science, on the other, to find any conflict between the latter and the latest results of researches into the tissues, leading us up to the certainty that there is a co-ordinating, invisible somewhat behind the finest fibres. I defy any man to find any conflict between the scientific doctrine of the spiritual body and the Biblical on the same point.

### THE LECTURE.

Blood means God. When Faust signs the compact with Mephistopheles, in Goethe's immortal poem, the ink used is the red fluid of life. And Goethe makes Mephistopheles say, with mystic emphasis:

*"Blut est ein ganz besonderer Saft."*

"Blood is a very peculiar sort of juice." The compact which sealed the fate of Faust was drawn up outwardly in blood. The compact which, I suppose, seals the fate of every Faust and of every Marguerite in this assembly is drawn up inwardly in blood. The superstitions of the middle ages, as to the compacts with evil spirits, are by no means too suggestive of the symbols of the truth of modern science. We know now that the compact can be made with white spirits, as well as with black. The former bargain, as well as the latter, may be drawn up in words written with this very peculiar

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fluid. Hereditary corruption! Do you wish to know what it is? The black wheels on which its chariot rolls through the world have been put before you here in photographic views of the morbid alterations in the blood discs. Responsibility in spite of inherited tendencies! Do you wish to know what that is? The white wheels on which its chariot rolls across all our corruption, ploughing their way through the mire of our depravities and victoriously ascending the azure at last, have been outlined here before you by science. Let no man think that I forget the opportunities which I cannot occupy, but which now lie invitingly before us, to consider the nature of in-born evil propensities. Hereditary depravity is a fact of science, for there can be no doubt that corrupt propensity is stimulated by inherited morbid blood. But, if any one doubts that above the grade of experiences which we call insanity there is moral responsibility, let him look into the depths of conscience. Not without a plan have I discussed, this year, first conscience and then heredity; for I wished in subsequent lectures to make inferences from both topics that will blanch the cheeks. In this place and now, however, as Providence may never permit me to stand here again, and as thousands of miles of travel and many strange events probably lie between this hour and that coming one in which, if at all, I shall see the faces of this assembly once more, I beg leave to point out the fact that we have ascended heights from which loftier pinnacles are visible. From the position where we now stand we may behold, above the truth of man's inherited evil propensities, the certainty of his power of victorious self-amelioration, under the impulse of a spirit that is in him but not in him. Heredity suggests fate. Conscience teaches freedom. Even Plato taught that the black horse before our chariots may be controlled by the white horse with which he is mated, and by the charioteer.

An Arabian chief was once brought before a tyrant, and told that he must kiss his tormentor. "I will do it very gladly," said he; for he was suffering from the leprosy, but the disease was not visible. He kissed the tyrant, and the latter became a leper. This, you say, is unjust on the part of Nature. But the possibility of the occurrence of facts like these is Nature's proclamation of the breadth of the distance at which the unclean should be made to stand apart from the clean. We read that men were once obliged, when lepers, to fall down with their faces to the ground, and call out "Unclean! unclean!" when in the presence of the healthful. This was Nature's law; and she adheres to it to-day, and when it is violated exacts fearful penalty.

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Can Nature be justified for the sternness of her rules as to contagious and hereditary diseases ?

What do the Supreme Powers mean by the majestic, irreversible laws of transmitted morbid conditions ? In the carmine growths of disease there is fastened upon certain vices the great red seal of God Almighty's wrath. Evil sometimes falls on the innocent. What does Nature mean by the terrific straightforwardness of heredity ? If the Commonwealth of Massachusetts had the power, which Nature has, to alter the blood corpuscles, and to cause the ingredients of the blood to deteriorate, as great Nature does on certain occasions, and were to make laws as to the morbid alteration of the life fluid, such as Nature has made, and were to execute them every time, you and I would say, "Massachusetts is fearfully in earnest." We have seen that Almighty God executes these laws, which He has Himself ordained, and executes them every time, and makes no apology.

I had read much of leprosy ; I had heard fearful stories of the East ; but I was never impressed by any presentation of the theme of Eastern diseases as I once was, five years ago to-morrow, on Zion's Hill in Jerusalem. I had seen lepers without fingers. I had helped scatter alms to them at the gates of several Eastern towns. As many here must remember, there is on Zion's Hill, in Jerusalem, close to the wall, a set of hovels, their doors opening toward the wall. There is a broad space of ruined buildings between that set of hovels and the city, and the lepers who are not too far gone are allowed to live for awhile in these hovels. Food is thrown to them over certain barriers. No touch of any vessels used by them is permitted to the healthful. I rode past that spot on horseback, and my guide said : "Turn your face the other way. Do not breathe too deeply the wind from those hovels." There stood, fascinating me, as I looked, a Syrian young woman, perhaps twenty or twenty-five years of age, inside the fatal barrier. She was dressed as any Syrian female, except that her face was uncovered. I saw no evidence of disease ; but was told by my guide that a single finger had been attacked, and that the trouble was wholly hereditary. She had been carried by the stern laws of the land over the fatal line. It was her duty to feed the aged and the infirm there, and to wait for the time when the white leprosy, coming out upon her hands, should cause joint to drop from joint ; and, finally, her limbs should totter, and she at last be in need of food from others like herself. I looked into her face. There was an inexpressible sadness in her countenance, and yet a certain serenity. God is in blood ; and do you say that Satan is in it, too ? Satan is a minister of God. I went from that scene resolved that, if ever

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opportunity came to me, I would woo the light of science to blaze before any audience it might be my fortune to appear before, and hold up not only the dark things that may come to man through the law of hereditary descent, but the white things also; for was I not wandering over ground which had been trodden by feet inheriting human conditions, and through a long line of ancestry lifted, till the brain of Him who spoke as never man spoke, although a human brain, was fit to be an abode of Almighty God. From those poor lepers up to that brain of the Son of God extends the breadth of emphasis which Nature gives to the theme of morbid alterations in the vital fluid.

What are the relations of the white to the red blood corpuscles?

1. The numbers of the white blood corpuscles and of the red discs in the blood are to each other as about 1 to 300.

2. The red discs are believed to be as inanimate while in the body as they are after the blood has been withdrawn from the vessels.\* Of course, I know that they are first formed by the bioplasm; but the red blood disc is a piece of formed material when it is finished. Each red corpuscle tends to assume a crystalline form when its movement ceases. Living matter does not crystallize.†

3. The white-blood corpuscle is a bioplast.

4. The whole organism at an early period consists of bioplasts.

5. These were the descendants of previously existing germinal matter.

6. All the bioplasts grow and subdivide themselves in the embryo.

7. In the adult, many bioplasts cease to grow in the older tissues.

8. The white-blood corpuscles, however, are bioplasts which grow and subdivide themselves in the blood of the adult, just as all the bioplasts did in the embryo.‡

9. The white-blood corpuscles possess formative power.

10. They possess this power, even in the age of the adult, in a higher degree than any other form of bioplasm in the adult. This formative power in the white-blood corpuscle is of a more general character than is possessed by the bioplasts in the general tissues. When we wound ourselves, the white-blood bioplasts are instrumental in effecting a cure. The bioplasts that lie on the opposite sides of the gash are concerned also; but without the aid of the white-blood corpuscles would not be effective.

11. The ancestral white-blood bioplasts from which all have directly descended were developed at a time anterior to that when the various

\* Beale, *Disease Germs*, p. 409.

† *Ibid*, p. 409.

‡ *Ibid*, p. 112.

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bioplasts taking part in the formation of the tissues diverged from that common progenitor.\*

12. Thus formative power of a more general character than is possessed by the bioplasts of the tissues belongs to the white-blood bioplasts.

13. The reproduction of lost parts or organs in some of the lower animals is probably to be explained as the effect of this action of bodies resembling the blood bioplasts.

14. At an early period of development only white-blood corpuscles exist in the blood.†

15. When the circulation is carried on slowly these corpuscles grow and multiply.

16. The number of white-blood corpuscles in the blood increases after a plentiful meal.‡

17. The blood flowing into the spleen has only one, two, or three colourless blood cells to 1,000 red ones; in the blood of the splenic vein, five, seven, twelve, fifteen, and more of them occur.§

As physicians here know, this peculiar organ called the spleen has long been a mystery; but it now appears that one of its offices is to increase the number of white-blood corpuscles.

18. White-blood bioplasts become in part transformed into red-blood corpuscles and cover the loss of the latter.

19. All the masses of bioplasm in the body have descended from one in a regular, definite, and prearranged order.

20. If from any circumstance the bioplasm that is to form a part of the eye, or brain, or any other organ is not produced, that part of the eye, brain, or other organ will be wanting in the particular organism.||

Such is a rapid summary of the latest research in regard to the relations of the red and white-blood corpuscles.

We are now ready to face a yet more central question: What are the laws of the origin and growth of morbid bioplasm?

Allow me to state Dr. Beale's theory of the nature of disease germs. I know how I may shock some who think that all diseases have an origin in vegetable growths; but I must claim that some diseases have a distinct origin in morbid bioplasm. I understand Lionel Beale's theory to go further than the one I am to put before you. The positions taken here I can merely summarize rapidly in

\* *Ibid.*, p. 109.

† Frey, *Compendium of Histology*, p. 26.

‡ Frey, *Compendium of Histology*, p. 24.

§ *Ibid.*, p. 24.

|| Beale, *Disease Germs*, p. 93.



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propositions. If you will read them in their consecutive order, they possibly may suggest more than they express. In the use of numerals I seek to save time and give conspicuousness to governing propositions, and this in their consecutive and logical order.

1. Morbid bioplasm originating in one animal may multiply in another.

2. Regular, orderly, and comparatively slow growth characterizes the multiplication of healthful bioplasm, capable of forming lasting structures and elaborate organs.

3. Rapid multiplication of bioplasm, on the other hand, involves degradation in its formative power.

4. The formative power may be at length entirely lost, never to be re-acquired.

5. Degradation in power is commonly associated with increased rate of growth and increased facility of resisting adverse conditions.

6. With this increased vitality in morbid bioplasm it takes up more than the nourishment that should be appropriated by the healthy parts.

7. These last are consequently starved, deteriorated, and at last completely destroyed.

8. Disease germs are sometimes particles of living matter derived by direct descent from the living matter of man's organization. The too rapid multiplication of bioplasm may give rise to diseased bioplasts, which may be direct descendants of white-blood corpuscles, as well as of other germinal matter.

9. By the multiplication of morbid bioplasts in the capillaries local congestions are caused, and in this way peculiar eruptions and rashes result. The congestions sometimes end in complete stagnation, and the death, destruction, and removal of the portion of the tissue affected.

10. The microscope shows that the blood in disease contains a large number of minute masses of morbid bioplasm, and products resulting from their death and decay, which are not present in healthy blood.\*

So fully have these points been illustrated by the elaborate microscopical exhibitions put before you that I shall not pause to enumerate in detail the conclusions supported by the photographs. You saw a sprout bursting from a corpuscle. There lies on that chair Lionel Beale's freshest work on *Microscopy in Medicine* and he recites

\* Lionel Beale, *The Microscope in Medicine* 1878, p. 264, and *Disease Germs*, pp. 94-127. On the whole subject of blood corpuscles see Professor Arthur Butcher, in Vol. xxxvi. of *Virchow's Archiv.*, p. 312.

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(p. 260) the experiments of Lastorfer, in which, after the blood had been allowed to remain several days in a certain temperature, these sprouting fibrils appeared. Several physicians, who challenged Lastorfer's assertions, put before him blood, some of it healthful, some of it morbid; and in every case (so the record runs) on which Lionel Beale relies he distinguished the blood of a man suffering from the nameless disease from that of the man who was healthful. We are fearfully and wonderfully made.

Suppose that you call up to this stand some physician and open his note-books. "I reside in the country," one of the revelatory confessions of a patient reads, "ten leagues from Paris. I have four children, all of which, together with their father and myself, have always enjoyed excellent health. Eight months since I took a foundling child to nurse, two years of age. It was a wretched-looking child, and had pimples on its body and sore throat. We permitted it to take soup with the same spoon as ourselves, and to drink from the same glass. Soon one of my girls complained of a severe sore throat. This increased, and she died in about six weeks. The foundling also died. Soon after this I began to suffer from an affection of the throat, as did these two children." This woman and the children died of a disease which cannot be described in mixed company.\*

Open again the records of authentic physical research. I find that a military officer, on bidding farewell to his niece, kissed her. Not the slightest unhealthful look existed on the face of the officer: but it appears that one of the formations which will soon be thrown on this screen before the eyes of you all had become diseased. Within a few weeks that niece was taken over the fatal line between health and corruption. She died of a single kiss.

Glance once more at these authentic records. We find an infant in the cradle. It has a sore mouth. It complains of a sore throat. But it is full of glee; it has attractive, affectionate ways. A cousin and a sister are here. They bend down and kiss the young human being. It is ten weeks old. Strange rashes and eruptions appear in its face. It is twenty-five weeks old. The sister and the cousin begin to be afflicted with the same eruptions and rashes. The mother says: "You must not kiss that infant again." But the mischief is done. At thirty-six weeks the babe dies; but the cousin lingers through ten years of nameless tortures. Shut out from all society, unfit, of course,

\* See *Westminster Review*, July, 1869, p. 210, and scores of similar cases in the report of the select committee of the House of Lords on the Contagious Diseases Act, 1868.

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for the offices most sacred in life, she dies. In 1849, the sister, who had married, although she had had eruptions on the face, and although maternal advice was against her marriage, brings into the world a child, strangely blotched at birth. It lingers on two years, three, four. By and by, the nasal bone drops. Other bones in the face drop. It grows emaciated. It is a mass of corruption. And the mother soon follows it into a loathesome grave.\*

Who did all that? *You*, dissipated young man, very possibly. What was the name of this officer? No matter. His name may be yours to-morrow.

There lies before me a book on the Jukes, a single family who in forty-five years has cost the State of New York a million and a quarter of dollars. We have heard of Maria, the mother of criminals; and know how inherited bad blood need not be such as to produce loathsome physical corruption, and yet may produce moral corruption. The Jukes family shows what belongs to the moral forms of inherited evil, as leprosy what belongs to the physical.

In contrast with the Jukes, remember the Pitcairn Islanders. In the Southern seas, on the sunrise side of Australia, a company of rude mutineers landed on an island; and, after the native males had fallen in war, the sailors were suddenly sobered by their loneliness and their need, and under some stimulation of memory, thought it best to be Christians. They adopted for the government of the island the best laws known to them. A new and noble population has come into existence. At this hour it is said that a Pitcairn Island woman needs only to wave her hand royally toward a sailor to make him a man, if he has been previously a beast. While in her presence he can only worship. White blood descends as well as black. There is good blood as well as morbid.† You have seen here, both in its clear and in its turbid condition, the fluid in which the blood-discs and corpuscles float. Lionel Beale says that the adulteration of that fluid is the most interesting and the most fatal of all the morbid alterations of the blood. You have seen this deterioration marked by physical signs exhibited to you at first-hand in some sixty or a hundred photographic specimens. As surely, however, as this turbidness and deterioration may produce depravity, so surely pure blood, on the other hand, gives instinctive impulses as capable of lifting us as the other is of dragging us down. God is in blood. He is the charioteer of our black horses, as well as of our white; and up the slope of the azure the stern reins and lash of His laws seek to drive both of them, the white no whiter than the black may be at last, under God's training, when it is complete.

\* See Whitehead, Dr. James, on *Hereditary Diseases*, London, 1847, for this case and a great number of similar cases in detail.

† See Prosper Lucas's celebrated *Traite d'Heredité*.







